

## SEQUENCE LISTING

<110> PE CORPORATION (NY);  
THE THIRD INSITITUTE OF OCEANOGRAPHY, STATE OCEANIC ADMINISTRATION,  
CHINA ;  
SINOGENOMAX CO. LTD.

<120> PRIMARY NUCLEOTIDE SEQUENCE OF THE  
SHRIMP WHITE SPOT BACILLIFORM VIRUS (WSBV), DISCOVERY  
SYSTEMS CONTAINING THIS SEQUENCE AND DETECTION KITS AND  
ANTIVIRAL TARGETS FOR DETECTION AND CONTROLLING SHRIMP VIRUS  
OUTBREAK AND SPREAD

<130> CL000895-PCT

<150> 99124717.5

<151> 1999-11-24

<160> 293

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 305107

<212> DNA

<213> SHRIMP

<400> 1

ggatccagac	atcaccccaa	caatcgcaga	cccgattaca	gtagcagaag	ttggaaaccc	60
tgctcgtgagg	ataaaaaactc	cttcatgtga	tgagttgaat	aaattcatga	gattctctac	120
taatttctca	tttttaaaat	acgtcaaacg	gtttatggcg	cagagagctt	catctaatag	180
taggaatgat	atgtccgctt	tcttattaga	tttgattttt	gaaaaattga	tagagttttt	240
attatcaaca	ggatggaata	gagaagctct	gggaggaaact	actggggcta	ttcttatgat	300
caggacggca	acttgtcgtc	tagcgcaatc	ttattacccc	ctccctgaaa	ccgttggtat	360
ggactttttg	caaacacctg	ggtttgacta	caataaatct	ttccctaaca	atgaaaggta	420
tatatatgaa	tttcaagcta	caatgtaaat	aattggttaa	taaaataaag	gtatattttt	480
aaaaaatgtg	tttatttttc	cccaacctta	aacagatcat	tgccaggaga	aaatcgcata	540
cttaacagat	aatgcctatt	tgtatcatcg	atgtcttcgt	caaacgttgc	tccaaacaca	600
agtgtgttga	tcctattttt	cttcaaaact	gttggtttga	aatataatac	aaatttggtt	660
gctgaaaatt	cccttcctgt	agcattttaga	cctggagaca	gtgaaacaga	gtccactggt	720
atatccctct	ttgtattatt	gtatactctt	gcatacaatt	ctaattcttt	agattcggct	780
ttgtttacat	ttagtgtgtg	gtctccgtct	ccaagtaaag	atgtgaggat	tatgtctcct	840
ttctttttta	ccagttcaga	atcggacgtt	ccttgccag	ctacatatac	ctttccatag	900
ttcctggttt	gtaatgtgcc	gtttacaaag	ttaaagtgtt	ttcctctagc	aacaccgtta	960
atggtcaagt	ttattatttc	agattcaaca	gggtaggcgt	ctttatcctt	cttgtccaat	1020
ttcttgtaa	gttctatggt	ggttacaact	atagatataa	ccacgagtat	caatgtcaaa	1080
cccgcagta	tagcggcgta	aacccccac	atgtgcattt	tgaagaaagt	tgtacaaagg	1140
tcattgagaga	aaaaaacaga	tattaaagtt	tgttatat	tatttagtcg	tagaaatcac	1200
cactgagata	tattgtgagc	agcaactgcc	gtttcagcat	actcgaaaga	agaatagttg	1260
cgatcctttg	aagccggcat	cttgaaatga	tgtgcagtat	tatttctgct	agttttgttg	1320
aagtactgga	tagcctttac	tgagttgaaa	gtttcacggg	aacagcttga	acagttgatg	1380
gaggaagaag	ttcgccctgca	ctggcaattc	acaaaggagt	gctgattatt	gttggttatga	1440
tggtacattt	tgaaggtgag	agcacgtctt	tcttcaacca	aaggtgtttg	tctaattgtg	1500
ctcaggtaca	tccacgctca	ccttttatac	caacgtctta	cagttccttc	agatcttccg	1560
tcatggcttt	aatcttggtg	gttatccctc	gatctacgaa	gaatctaata	tctccctcag	1620
atctgttcaa	aactttccac	gactccattg	ggccagagt	ataatctgac	ctttctatgt	1680
ttttgacaac	tacaggatct	ggttgaatat	atgcagatga	tgcatcaaaa	tctacttctt	1740
cgccgctcat	gcctgtttct	agtcttgaaa	ggagtgtgtc	caaactcttc	tcttcttcgt	1800
cttctccat	ttcttctcca	ctatctaaaa	attcgtctat	atcattatca	tcaaagtcta	1860
tgtctatatc	atcatcatca	tcttccccaa	gagatgaaga	aggagatggg	gttcgtgtcg	1920

ggggaggtagg agggagtagga gtaggagtag gtggaggaggt agggagtagga gtaggagggg 1980  
gtggaggtaa caaaccttct ccaggcacag ttccgtgttc tccacctcct gtattggacc 2040  
cagtatattac actcggttgt tcaaattcaa aaacttcctc ctcttctttt ccgtcttcta 2100  
cagcaccttc ctctgtctctt ccgatcggcc tattttcagg ttcccttcgc cctaatacag 2160  
ctccttcggt gtcattctctt ttttctctct ctttatcttt ctttgttttt ttattggatg 2220  
ttgtagtagt tttatttggt cgtgacatga aaatcacacc aaccaccaca cccacaaaac 2280  
acacaaaaag tatgagagat aataaaaagga acatcattat tatccttatt tttttacatt 2340  
caattatggc accagaaaaa taaaatgatt tgtacaaaca cgagttaccc ctccacacgc 2400  
ctgacctctg ccgcgaattc ttcataccct tccatattct ttgctgcaaa ggtcacgtca 2460  
tgttgatgag ctaccatttc atatcgcata tctcgccaaa aagatccatc cgcaacagcg 2520  
gccgtgcatt ctcttcaat ggcagaagtc atgtcagctg tcattttttt aataagatca 2580  
cgtagtattt cctccctata caaatctata accttctgcc taaagacagg cctctctgct 2640  
aaaagagaag gattttctgt aagctggctc atgggtgtaat aaagtgttca tttatctaac 2700  
ttttaaaacc caaactcttc taaaatatct acagattcca ggtactctgc cgccattggt 2760  
gtaatcattg tatttgcctt gtctatcact gcttgtcttt tatcttcac atctccacc 2820  
tcgtcttcgt gtttttctt tcttcttctt agaagccgtc taaagacagc ttctctaatt 2880  
gaaggattta gccctcaac tacctgagaa gcttcctggt ttacatcatt cacaattcgc 2940  
ggcgattgta gtacgagcgt gatcgcgctc ttgtagatgt cttccaaaat gtccattttt 3000  
gttggttaga cctagataga gagtgggaga cgctattaat tttttgttc atgtggtca 3060  
tgacctcatg tccgatatat gtattggttg ggtgtaatac aagtctctac aaagcaatag 3120  
aaggggtaaa aacaaaacac accatggtgc taactctttc ctgtacgact aggcgcgtag 3180  
cgtctagcaa ggggaatttc tctaaggaag atgcggtgtt ggggaaccag ttccccattt 3240  
taaagaaatc aaacaacttg tcaattgcaa gacctccctc aatagaatct ttttctgcat 3300  
cagtggaaaa aatattcagg gaatggaacg aaagtggggg agaaaaaatt ttcgacatat 3360  
ctcagaatgg agaagaatgg atggatatca tatccttagt ggaaagtgt tatgaacctg 3420  
tattttctaa atcacttaaa cctgataaat tggcagataa aacatgtcta accgcggctg 3480  
cctttgcagc actagcttct gccgtggatg aaaaattgac aatcttatca ggtagtgtg 3540  
ggagtgtgct tcaacgtaca acaaaggtta tgaaaaagga ccccaaaaaa atagcagaat 3600  
ctcttttaaa taatgaaaaa tggacatcta ttttattgga cagggtaaaa acagccaaga 3660  
aacttctaag cagacgaggt gcaactgaaaa gcgccgaaag agtagaagta cttcatcggt 3720  
tgaataaact caaggaggct cctcttcccc accatccgag cctatttgat aattttagt 3780  
gaggaaaaac atcagcagta tctgctgga aatcatcgc atcagatatg catttcaa 3840  
tggttgaaca tatttttaag gtctccttta gaaaatgggg tccctgtgga gataaaactg 3900  
aaagcgggga agaagaagat gaggaagaag aagaagaaga aaagaaacat tccatatcaa 3960  
gattcgtgct tcaatttatg aacggacaca acgggcaaca ttatcatagg cccgaaagt 4020  
cttctgttta cttttgtgat tattatgact atttggccta caggaatctc cctaattgag 4080  
acaaattatc gtcaatgcac cctggcacat tcaatatgga ggatttacct ttccgcctt 4140  
tcgcagtacc ttcaacttat aagacagaat tagagtacaa aaggtttgtg caatcaacaa 4200  
atcttcccca gctaagtttc gactatgggg agtttttatg ttactgtatc ttcgagcag 4260  
attggtacaa acacctgggg gatgtggtag attctctaga aaatagtcc atgatatcat 4320  
ttgatttca gacattgagt ggtgtgtata agaactgc taattacaaa aggttgggga 4380  
agaaaagaaa cggaatagcc gatttggccg ttaggagtat ggcagaattt atccgcactg 4440  
aagcgcataa ggcattgaca gcagaagaga tggaagaaga agaagaggaa gaagaagcgg 4500  
aagaagaagc gatggaccag gagcctgcag aagttagact ctttcagtg cctcatttac 4560  
gccgtaaaat tcgtcaagct gtttctgtgt taaataactt tgtggagaac gatctttcta 4620  
tattggtttc taacttcaag aatgtgttaa ccgatgatac tgtatcagga acagatacgg 4680  
acaactttgg ttctagtgga gaatttgaag cattatcttc ccatttattc ctttcaagaa 4740  
tattggatga agtgcacatt cttaggaata ctgatataca aagaacccta ttttcaacgc 4800  
acgtgtctct gtcgataaaa tctccccta gccgtgtccg tggaagcaat gtcaacttta 4860  
ataataacgc tgggaacatt tcttccctgc aaacgtatgg cggtatagaa gagttgcctg 4920  
aaaatgtact agtcggtttg tccggaggat ttgaagatac cgacatgtat tccggagagg 4980  
atgttgttgt cgtatgggat ggttgtgatg gaggaagaag gctaagtgtc accttcaatt 5040  
gtggtgataa ttttatccag ctccatgaaa aaacagcaga aacttttaag gatgatacgg 5100  
atttagttga acgaataaga gatgtgcttc agactgcaag taagaccgga aaccttaaca 5160  
aaaaagcata tccaaggaag aacatctacg ctgttttgcg tgaaaatggc attgagcgc 5220  
ccggggacga ttttacagaa aaggggattg ctctcaagga taaaacaaat caacccctc 5280  
cccctgcaag aagtgccaa gataacggtt aaggagtcaa gggatttttc agcggttttc 5340  
gtgacatttt ggagacgagg gcgctcacca catatagtgc agaaaccttc agagatttag 5400  
gccaaggcat agtaaaagag accgaaggac tgacagctgc aacagtggca gaaacatcct 5460  
tctctgaagg tttagctgaa agtttaaggt ctgatgcgaa tctaggtcta gaattttcag 5520  
aggacgcaa aacggttgta ttcaaaaatg acacctctcg ttctttattg gaagaaacta 5580

gggcattaag	agcaacaat	acttcttttt	cgctcgtttgc	aagggacatg	ggcgtccaag	5640
ttagtgcga	tttagatgct	gaatttgctg	cagagatgag	agaaacatac	cccgatgcag	5700
cccttgaaca	aaacttgaaa	gatctcgaca	aattcgaaga	gactatacca	gaaagtcaag	5760
tgaagaaact	aaagaaaata	gacagttatt	tgacagagaa	tccagaaagg	gctggcaaag	5820
aaattaacga	cactgaactg	tcaaaggcta	cagattcagt	attggggaaag	aaactaggca	5880
atgcagttac	agtgttgatg	aacaactttg	gaaaggttac	aattgtagta	ggggcttctg	5940
tggtggccgg	gttttttaggt	ccagccgctg	tcgccctggg	gcatgcgtcc	agaggggcac	6000
atctcaacgt	cgtggaccac	accagcccta	aaggtgtcat	cagttataaa	attgtggact	6060
tttcttgtgc	agatagaaac	accggatggg	ctaagccaac	caagcaccgc	ttcagggaag	6120
aaatagacca	tgttatcgca	ctagatgcat	cattcttaac	tgaaaatgga	gcataatgat	6180
tccctgaaga	cggaggaccc	aaatcgaaat	ataaggccta	cgcaccaatc	tgtggaacaa	6240
aagatgctgc	tcaaggagaa	tgtggatctt	gggcaacatt	cgacgaccgc	cattctgtat	6300
tgccttgggt	ggcaagcatg	aaagatttgc	ctaaaggaca	atccctctcc	tgcgataaag	6360
ggatgtccac	tttaaaggca	gtttcttccg	ttcttttgtc	cataggaaag	gatgttcgag	6420
aggctatttt	tgaggttgca	gaggacgccc	tggtgggggt	ggcgagcaag	gcaatttcag	6480
ctgtaataaa	taaccctctg	ttcataattg	gagtgcctct	tggttttggg	atagctgcta	6540
cacgcctcaa	tccatccaac	tgaaaaactg	gcctcattgt	attttcaata	ctactagtgg	6600
tcatactgat	agttcgcttc	tttgagggt	cgggcccgc	aaccctgaat	tggttttggg	6660
caaagaattc	agctaaaagg	aaacagactg	aacaattcga	agacggggga	ggaaatcggt	6720
caaaaatagt	attggcagaa	aaggacaacg	ccaatagtaa	acttcaatcg	aggaggaatg	6780
aaactgggcc	catgagatta	gaggagcttc	ctgggcatga	agatttgcgc	ccagttttct	6840
tccttgccac	aacaaattat	tccaaatctg	ccaagattct	gggctacaaa	tctaaaccct	6900
tcaacgactt	ttatacaaaa	ataataaaca	cagacatcat	aaaaatggat	aggtaaaata	6960
acacattaaa	tgtatatttt	atatattttt	attttagtaa	caataaagat	tatacatgta	7020
taaaaattgc	attgttttat	tcctatacac	caacaataga	tatagactta	tcactaagat	7080
tataagtttc	tgtagacgtt	ttccatcac	ccattctgat	tttattccta	ttcttctcca	7140
aaacagattg	cattccgtgt	ccatcaacat	ccgtgttctt	cttgaagatg	tggtttatat	7200
atggctccga	catatcttgt	actgtcgatt	ggatagtttc	agctagggaa	tgtttttctg	7260
gtccaaattc	tcctctccca	taacggatgc	gacgataagc	ttcagcagaa	gccagcaggc	7320
aaaagtgggc	ccagccagcc	tcgtcagtac	acatgggggtg	cttcagagtt	tttgttctat	7380
tgtgcacatc	aacatattgc	ataaaatcgg	aatgggtcaa	gtgcatgtcc	tttaatttat	7440
ccgtttttga	caagtaagtg	actggcaact	gtttggcagt	aaattgttca	ttgatattag	7500
aagtggagta	tttttcttgt	ttagaagcat	gtcgtatata	gagagcgaca	gctaaggcag	7560
ttattgctag	aataaagaaa	acaccaacaa	ccataggcca	attcattcgt	ttagtagtta	7620
ttacaatttt	gttccacatg	gtcataattt	ctcagaaaag	ttcctcaaca	ggggaattat	7680
agtacgtgat	agaattgcag	tgataggcac	aggcggatat	tccgacggtc	ctcttccgat	7740
aatattttgt	ctagattgaa	gcattgcagc	aatctcctgt	ttagcatgga	caacctgtat	7800
atcatcacga	ggcaaaaagat	tgctctttga	tcctttttgat	aaagcttcga	tgtttataaa	7860
ggaacctaaa	agtttccaca	ttatagcaat	gtgataaaaag	ctgtccaacg	aagcatatac	7920
agcagctggg	aaagtgtgcc	atattaattg	cccactttgt	aacgcagagg	ctaaattttc	7980
aaccccgatc	ttgttgcttt	ggcagatggt	cgccatccaa	tctagttttg	ttatcgatatc	8040
tagaactggg	gtattcttag	ccagtttgac	tgccctccct	ttcggttctt	tggggaagta	8100
aactggctcc	ttttcagtag	agttggtttt	tatgtttttc	tctgatgcag	attctccaaa	8160
atataacagt	tggcgaataa	tggagtcaac	ttcaatagta	tcactcttca	ctaattctat	8220
gtccctttcg	attagttggc	acacgtcttt	atctagcctc	atcctgttag	agtttctctg	8280
ttcggtgct	ggtgctgtcg	cagacgcagt	tgctattagt	ccatcagatg	cgtccagtat	8340
ggaattggga	ggaggagctg	caacagataa	catggcagta	atatcatgga	tgattttgga	8400
gtagtccagt	tctaatacat	caaaaatcctg	ttcttccctt	tcctccattt	tgttggtgtc	8460
catgttttag	gggggatggg	tgttgatact	accgcagctc	atgccgtaca	ccgaatgacg	8520
agaggaggta	ggagcaggcc	cttttttatag	ccctaaaggg	ccattatcga	cagtactatt	8580
atagaagtta	tttttatccc	tgatattata	caagcagaga	aaaatttcag	tctacttgca	8640
ggagacatct	ttttaataaa	tttagggagt	cttctccaag	ttttcttctt	attggttttc	8700
tgtttcttgt	ctgttggttt	tttgagtctt	ttgttggtta	gcttatgtat	ttgggggtgc	8760
cgattacggt	gcctcttctt	cctttttattc	ctgtcagcaa	gtaaaatatc	cttttcgtac	8820
ttgataaatc	tataacagta	ctttttttatt	agcctgtttc	tggtcgtgga	attccgtgaa	8880
gaagatcgta	gaaggtttgc	atcagcagat	tggtgattctg	tatctgaatc	ttcttctctc	8940
tcctctccaa	gaagagaatc	gacgttagtg	tctgattcag	agtcataatc	ttcttcttct	9000
tcttcttctt	catcgcttga	agggatggcc	gaagacgtgg	gagaagaaga	ggaggatgag	9060
gaagaagatg	tagaagtaga	agccatttct	ttgtttgttg	ttgttacctg	cccatgttcc	9120
tcctcgacat	catcttcttc	ttcaatctta	ttcagtgcac	ggttcaattg	ctgctgataa	9180
tgcccttgtgt	ttgttacagt	gctagaccat	aaagccctcc	tggaagcagc	cgatgctcca	9240

gggtccattt	ctgatcgct	acatctaacc	ttagcaataa	ccagaaatac	gtgctttttt	9300
tttactttca	gccagccgtg	ttagtcatct	acggaatggt	gtctttgtct	ttagatgagg	9360
agtcgtacag	gcaaaatttg	ggtaaaccct	caaactcgcc	tgtgcagtta	tcaaagcata	9420
tttgtatcaa	agaaccttcc	gcacctatta	aatttccaac	cataaaagag	tctatgtgtt	9480
cattaacaaa	aacactatct	tcttttagtga	gtgttagttt	ctttctattg	caagttatta	9540
tgtccacatc	gtgcccgatt	gtgttatctt	tatcattgat	gacagaaatg	tcgtaagcac	9600
tttctccttc	ttcttcccc	cactcccttt	ctgtctgttc	ctcctcctcg	tcttcaaatt	9660
cttcgtcgtc	gtcttcttct	tcttccctcc	cgccaaacct	ctccctcggt	tcttctctct	9720
cgctcattat	tatatgtctc	ctaaaattct	tgtccaataa	ttttgtaatg	aaaacacact	9780
ctggcttctt	cctgaccttt	aagaaacttg	catccatcat	gctgttcatt	ctcatatcac	9840
aaaggccatc	atacctatca	tctctggcca	tgatcgcttt	gacgctcaag	aatatatcgt	9900
acataatctt	agactctttt	ttaggtgaga	aaagttggtt	ttggaactgt	ctaaaattaa	9960
tgaaccacag	ggacaatttc	ttagccaaac	ccagaagatg	agaacctccg	tacctttctc	10020
tgtgggaatg	tgctagtgcg	gcattatgta	tagtaaaaaa	caaaccagga	ttttcttttag	10080
ccaaactctg	tataacatta	gttgccgtca	ctacaggtat	gagatttgtc	atatctaatt	10140
caggtacatc	taaacattca	ctgataggaa	tactccctc	tttctctcct	tgaccaacaa	10200
ttctcaccgt	cactagtgtg	tgtgcatctt	ttatggctct	atcataatca	tgggggaagt	10260
ttgatagagc	taacgttgta	gcattttctt	cttgcaaagg	taaaccacct	tcgtcttcat	10320
cattgtcggg	aacatcttca	tcaaagtcca	tgccgttatt	gttattatat	gccattatat	10380
tagagaaaac	atccatcttt	ctattcctag	gaccagaagg	gagcattaga	gcagttaatg	10440
aaggtgcatc	actttctatt	ttatttgtct	tggaagtaac	ttcgttattt	ttcgtattca	10500
aagtgtctat	cagggcagat	gctgcatcac	gcactcgctt	ctcgcgtggg	agaagattgt	10560
cacaatcaga	tttaaagtgg	actaaatgca	gacacaaatt	agaaaaaacg	aattgagatg	10620
cggatttaac	aatggacaat	atttgattat	gaggaagtac	agacgtgaaa	gaaagagcat	10680
gccaagatgc	gtctgatgat	gtgattttat	tttgggcacc	tataactact	agcgctatgt	10740
gcactcgcag	gacaattact	tcagtgaaga	taccattttc	taacgtcaaa	ccttctaccga	10800
atgcaacccc	tctctatatt	gtcctcatca	tcacttttga	aaaatgttcc	atcaagtgtg	10860
cctttgtcat	actggctgtg	acaatctgta	cgatattccc	catagtcttt	aggactaacc	10920
cttgatcgat	aaattgttcc	ctcataactg	cggcagcaat	atctatggaa	ttattactgt	10980
atctatcggc	atatgttctt	gcctttgaat	ctttgatcct	cttatccaaa	ctatcaaaaa	11040
atcttctctc	tgcgggagag	tctgtagaga	atatgaggaa	ctgagggact	gaaagtgtac	11100
cgtttctgtg	agtcctaccg	atagtctgta	ggaaagcaat	ggcgtttata	ggtacattcta	11160
aaacgcaatg	gtaacgttta	gcgtacatgg	agttattaga	agagtcatgt	aaagagagac	11220
cggtattgcc	tttaggtccc	agcattataa	cgtcgacttc	tttcgtgttg	ttgaatgcac	11280
taatacatct	gtttgtgttg	gcagtttttag	tgttgttttt	aaccagaaac	aatccccctat	11340
tcgttatcacg	cgaacacaat	ttcctgtttg	ttatttcagc	gttactatcc	tccccctattg	11400
attgtgtgat	tgaatctata	gggttgccgt	ctagcgccat	gagcggttcc	gtgtcaggga	11460
ctgaaggcac	aagcataacg	tgagctgggg	aagttcttct	attggtttta	ttctttaaag	11520
agattgtgaa	agctgaagcc	atcatgactg	cacggcacaa	aagtctatag	cctgagaata	11580
ttgtattagc	aacaggcgat	gaatcgaatg	tccccacgtc	tacgatgccg	tattttgcgt	11640
cactttcatc	cttgccgacg	gtttgtaaga	tgctgttagt	caaattcttg	agaaaagaat	11700
ccccagtttg	ctctagtgcg	atgacctctt	tttttgattc	gtttgtgtgc	cttaaaccgt	11760
tactgcatc	ggtgcagaaa	gttgccctga	tattcaatag	tgacacctta	catgctgcca	11820
cagaagtact	tgctgtatta	atgaagtatt	gtctcctcaa	cttttcaaaa	cactcgctcg	11880
caaatacttc	accccatccg	tcttcttcat	tagcaccgtc	gtcataatct	tcgttaaaat	11940
cagttttacc	tttggaagg	ttttcccttt	tcttgatagc	atcgtataaa	tcttgagcaa	12000
ccatatcaat	gctgcttatg	tcaacttccg	gagacgttat	tattcctcct	cctccattag	12060
aaagcgcac	ctttttctgt	gagtaggttt	ttatagcatc	ttgtactata	cttcttagtg	12120
ttgttttccc	atcatgtgcg	acatccctat	cgcgcacaa	caccacctta	aaacgcctgt	12180
cgatattttc	cattacttca	tataaatcat	catcatttgc	agcacgtttc	ctcttcttgg	12240
acggggaatt	aatctctgct	actaattttt	caacatcttc	ctcttccaat	attcctcctt	12300
cttggtgttc	tcgtataatc	tttgtaagg	cccttctgac	atgtcctcct	actttttcag	12360
aatcgatgag	tacttgtcta	gcgtttaaac	agtacgaagc	caattcgtct	atagcgtatt	12420
tttgaagagg	ggaggcttta	caattagtag	tagagcagtc	gactccagcc	atgctaatac	12480
tctactaac	caattgtcct	ctatttctta	aaagtttaat	aacctgttcc	agaaacactg	12540
tcacgtactc	gctgtgctca	gccatagcat	ctggagtagc	actggacact	tctttgaagg	12600
cttgatgct	cgtgtaggct	ggcgcacttt	tctttagtat	gtggtcaatc	atgtgcaaat	12660
cagcattgct	ctggaatggc	gtagcgctgg	ccataaccgt	gaacgtatca	tactttaaga	12720
tctctaagaa	aatacggaac	gcacagctt	gagataatag	tttcaagtag	ttggacattg	12780
taactcggcc	cttattattg	gatgatttca	tgcgcttcac	tttaaagttt	ctgctgctac	12840
tcattgcact	cttgaacct	ttaataagg	ctgacactga	agggtttgcc	cttttttgta	12900



tggtgcgcaa	aactctagta	tcttcttctt	cccaagtctt	tgccagttcc	tttctaaaag	12960
agtcactaat	atthttgagtc	ttgtggaact	cgtcacataa	taatgctgtg	acaaagtgtg	13020
caatgggcat	aaccttggtg	gaatcgaggt	ctgttctctc	tggtataaat	ttcagtacaa	13080
attccagatt	tgtgcgtaaa	tcagagtacg	tcataataaa	aatgggtggc	gtttctgtta	13140
agaaatctcc	tattgatctt	gaagaacgct	tactatgaaa	ttccttaaca	tccctgagag	13200
tgaaaaatct	aatatccacc	gagtccttag	cagacgatac	agaattttcc	acatctactg	13260
tcattggacc	acttttcccg	tcgctcttga	aagacgttgg	tttattagca	caaggcactt	13320
gtagttttct	ccatgaaaaat	ttaggatcac	gaagacctct	agaatttgta	accacttctc	13380
gcatgccctg	ttgacagctg	ttgaaaagag	gcttagagca	cgtcaacccat	ataaaaaagg	13440
gggtgcctttt	ccacacgcca	ctgttgatgg	ccgtaattac	cttgtccgaa	tcttgaccaa	13500
aaattgatgg	ccctacgtgt	ttttgtacat	ctaagagtgc	cttttcttgt	agtatgacac	13560
tcattgacgaa	ggctgccaat	tctcttgttt	ttcctacacc	agtaccatct	ccgatgataa	13620
atcctccact	cgthttcttg	tccactttta	aattcttttc	gaccttatct	ttcacaaggt	13680
ctataatgga	catgttcttc	ttccaccctc	ttcctttgta	gaattgaatc	agggctagac	13740
gcaactgctag	tgcttgacac	gaattaatgt	ccatcggtcg	aggaagaaat	ttggggtagg	13800
catcggttac	atthttgacg	aagcccaccg	accggaatgt	ttcactctca	taaagagcga	13860
atgaagggtc	tggttgaggag	aggttgccaa	tctcttttagc	atcttcttcc	tcagaaata	13920
aaagtthtgg	agccatggta	attcaaccag	aaaatcaacc	aatatatgtt	gtaacaagaa	13980
gttgctcttaa	gaagactctt	gtgtactttt	tttcagatac	ttgaaacgag	tacgcctgca	14040
cggtacaaaa	atthtggata	ctgttttagct	gctatttttg	gcaaaataat	agthttttatt	14100
ttcccatgct	aaagagaacc	aggagttagc	tacagccata	ctagtctcta	caagtaatcg	14160
tctataagcc	tcagaagtat	ccacaccgtc	cctgaaccac	gaagtthctt	gcacgtccgc	14220
cttcttatgc	ccccactcga	cgagtgaact	cttgaataga	gagaggggtg	ttattgtagc	14280
tccttcggggg	gttgaggaaa	tgthtgacgc	atcaaacgct	agacgagggg	ctgactgtac	14340
taccgggcca	ctcttggggg	tatgatccaa	acgaaacgat	tgcaaaccct	acgcacgtc	14400
gtcaatatcc	actctgtact	cggtgagga	agatgatgtt	ccgaacaatt	tttcacttcc	14460
gggagttaca	ttggagcaat	caaaatagct	ggggattgtt	tcgctgtcaa	atatactatt	14520
gtggtctact	gaaaaaatat	cgctcgtagc	tccttcttcg	ggaagaacag	agtaggatgt	14580
ggggaaagcg	tactgcaaag	gattggacac	tttcaatgta	ctggaagttt	ttgatgcagg	14640
ttttcttttt	aggtaatcta	aatcaaacat	atctcgcgct	agcacagtag	cagcataagg	14700
tcctgtatga	cgctaataa	acccctcttt	caatacaaaa	gtatcctcag	atthtttttt	14760
gatattgtct	agaaattctt	tcctcttcat	taaacatccc	caagaacttg	atttgagata	14820
tatttctact	gtcctcatcc	ctctcgcgtg	tttctttatt	acgtattctg	tctgagacaa	14880
tctcctctca	tcgttaaaat	tacgttcaaa	aaagtcctct	atthcttcca	gcctttgggtc	14940
acctgtagaa	ttgtactctg	gagctggagt	acctccaggg	ggagtthctga	tataagagga	15000
gggtttatth	tgactcaaaa	gtgtagagaa	taaaagttca	gatccgccgt	gaacactacc	15060
cgaaaccatg	cgactatttc	gcaaaccattc	tggtggccaac	atactatgtt	cataggggtt	15120
ttgaggtatg	tttccggcca	aaacattagc	tgctggctca	atgtaaaagg	gtgcagtaga	15180
gaatggccta	tgctgccccg	aggaaggtht	gttcaggacg	ggagctaaac	aacttctatg	15240
taacaatgaa	gacgggcgga	tgattacatg	gggaatatth	tctagaggag	gtaaaacagt	15300
gctaggtatt	ggtacaaaga	gcacattctt	agaagtatth	gttgcatcca	ggthtaagg	15360
cgtgatgatg	ggcgcttggg	ccagtgaact	tttcttggca	gtagtthctg	cgatacttga	15420
tttaggtctt	tgctggtgaa	tctggtcccc	tccttttagat	tggtcggcca	agaaaattcc	15480
catggcagga	acagtcccc	ctaaccggtg	cctgtcatcg	cctattattg	catgctgtt	15540
tgagtcttgg	ggattattaa	cgcccggtac	acacttcatt	gtgctcacat	caaacgtaac	15600
aaacgaaggg	tctatgttgg	gcatcataac	acaggggtth	tcatacatt	catacatacc	15660
tctgaattth	atatactttg	ttacatcttg	agaaagaagg	tcgttattta	gtacatcctt	15720
cttattatta	cagaaacagg	tgatggggtt	tttgtataaa	aattcaggat	cgthtgactt	15780
aattthtgaat	tcgccaagg	aagaagattg	acgcaatttg	gagatgtaag	aagagttgcg	15840
gaattctgta	tgattccgta	tttgttggth	ctttaatata	tcataataga	ttgggtgcga	15900
agatgaagga	ggtggtgggtc	ctttgtgggt	tgaaggattg	aaagcgcaag	cagtcacgca	15960
tgthctctcc	gaacctccga	aatatgttgg	gtatthtaggt	ctgcattgcc	agccccatc	16020
atctgtcaga	acgactatag	atgtgtgcac	agaacactct	ttactacac	gttctccagt	16080
ggttggggat	gtthctatgt	ggtcaccggg	cagthttctt	gaccaacaat	aaggtthtagg	16140
atcttctcca	gatttatgtg	tgataaatgt	tcctccagca	acaaatgggtg	tcatacacag	16200
aactgctctc	gaggtataac	acacagatgt	ccctctttca	acaggaactgg	aaggaactgg	16260
gttggaacag	tacccgccag	tattgtaggc	caaaatatcc	acatcttcat	catgtctctc	16320
tgatgtagat	ggaggaggag	gaggagcgtc	accacttacg	cctgatgcac	tatgggtgatg	16380
gatatcatgt	acaccaaata	aagaatcgta	caattcagta	tcgtcttttt	ctatattatc	16440
cttcaaattg	accatctctt	gtctaaactt	tttccccgat	acagcatcta	gatattthgtt	16500
agattthttcg	atgggtgacct	cactcaatct	atctatatgg	tgthtcaggca	cgagaagaga	16560

tgaggatcta	tttgagccta	aatcatgact	ttcgaaccga	gaattccttt	ccttcgtttc	16620
tgacggaacg	ttccatttat	tccctttaac	agtcaaattc	atcatgtcca	ggagagcggg	16680
gtgaggtggg	taattgcttg	catcttccac	ccggtcatgc	ctacctctgg	cttctaggta	16740
ttctttctagt	gtcttttcag	ggttagctcc	ttgaactgct	ttcaatttac	ttttcatccc	16800
taattcgtgt	atagcttgaa	aattaacaga	cattggtttg	gctacattat	aggccattgc	16860
agcgcagact	agcgcaaaaa	tacagcctaa	cacgaacacg	gtcacgaata	acgttatattg	16920
cgcggtgaag	cgcatacttc	ggttggtagg	gtaaagtaac	ggatctcttc	gtcgttcac	16980
catcgttcct	gatattacaa	tggatatctt	cctagataaa	tctcatacag	gtgccacct	17040
tttaggttct	tataagacgc	agactgtgaa	aaataattct	acgttaaaaa	agcttaaaat	17100
gggcgcgct	accaacgctg	attttacacg	cacggtatca	ggagtagctt	cttctctcta	17160
tcttggttaac	cctggagctc	cttccgatag	agaaaagtta	gttttgccct	cttcttattc	17220
tgactctttt	gtgtacaact	acaaggatgc	agtggtgacc	gctgaggctc	ccaagtgggtg	17280
tccctttaac	gagccagctc	ttcatgagca	catcatgaac	agacttgaaa	aagctggctt	17340
aattaacaga	tctcgttttg	tgtgtaaccc	tgttaaatcg	gctggagaag	tatgcggatt	17400
tcgctattct	ggaggaagta	ctccccagaa	cttaattttc	ccgattggag	catcagagat	17460
aaattgggtg	gtcatactta	gaaatgctgc	tcgttttggt	acagtggcag	catcggccaa	17520
agacgccatc	gaacgcattc	ctgatctaag	agaagggtgt	acaagtaaac	atgtggcaaa	17580
gaatgcaatg	aggagacttc	gtgtatggcg	agcctttaac	tggatagcgg	aagcctccag	17640
atcagcgggc	atgattcgct	acgaaccctt	ttcggttggc	tgtgctctat	acgatcacga	17700
ggtaagaaga	aggcaactaa	aaggaagtta	tgaagcgaat	gtactatttc	ttggtgacca	17760
tttctgtaaa	gaatcaactc	ttctggctga	tatttcaaga	gggggaagaa	gttctgattt	17820
ctggacgatc	gttgaagctg	tcattccggt	caagaataga	catgctcgaa	caatcagtaa	17880
tgaaactaat	gccatccctg	aagactcttc	tataaacttg	gagtgggagg	atgttctagt	17940
aaaaaaccaa	cgcgacacaa	atcaaggaga	tgattctacg	ttagaaaaga	ccttagaagc	18000
tgccatcaaa	gaacatgaaa	gcataggaga	aaaaaggaaa	aaacatatcc	tagagtttat	18060
taaaacatgt	ctaacagagg	agcaacgaga	aatgattttt	aagggaagtg	gaggaaaagg	18120
gaatttgtcc	ccggcccatc	taacaaatct	ggccgatgcg	atactggcta	ataatgccaa	18180
agcaggcata	tgggttatta	tgcagagtct	tttaaagcaa	atcaatttct	ctatactcca	18240
tttaataggg	tacgaagctc	aacgactttt	aatgttcaag	ttgtatatgc	ctgcattact	18300
tgctcttttt	atatctcaga	ggggaattgg	tgacgtgttt	ctgaatgggtg	tgtttaacct	18360
agaagtgaag	aaagaagag	ctgcaaatgc	aaaaataaga	gacatggttt	ctcgagacgc	18420
ctacaagaac	aatactaacg	agtctaataa	tttgggcaat	tattcccaat	tcgatatacg	18480
tacaatttat	ggtcaaatgt	ctgattgtaa	tgcaattcct	ctatctatta	atattggagt	18540
acctctccat	aaatcgagga	tgaacatgca	agacattgaa	aagaccatac	aacacatagt	18600
ggatatgggt	ttggcaaaaga	tacgtgtagc	ggaagaaaat	agagttagcta	gacgtctttt	18660
acatagaaga	aaaatgcaag	aaaaggcagc	cagggagcga	gcagctgcga	gacagagaag	18720
actaagagg	gaagaagaag	aagaagaaga	ggaggaggag	gaagagggag	aagaaatgga	18780
agaagaggga	aaagaagctg	gaacatcagg	tgtaattggt	tctggttatg	atcaagaaga	18840
agaagatgat	ggtgaggagg	aggaggagga	agaggaaaga	gaggatgaag	aagatagtga	18900
gggtgaagat	atgaatgggg	aaaataactc	aagaaaacgt	aaaaaactg	gtaatacttc	18960
ctccactcaa	caacctcccc	aaaagcgtca	gcgaggtaaa	aatgcgcccc	tttcaaccaa	19020
gggaaaaaag	ttaaaggaaa	gagataatat	tggaggattt	ttattagcca	caattcaaaa	19080
cgatgaccgc	caagtgaatg	tggagagcat	acaaaaactt	ttgacggcca	ggcaaagaaa	19140
atatgttaaa	ggtggaaaaat	gtggagataa	tggactacca	gaattgttaa	ttgaaaaggt	19200
tacaaatcta	ctagattcag	tgttccattt	cagaaagggg	tctattctta	acagcatata	19260
cgcaaatagg	cgatcagaaa	ctggcgata	caccacaaag	gcaaactgta	tttgtgatta	19320
ctatgaaaga	aacgtatcaa	aagacagtag	taataatata	ccccattcat	ctgaatgtat	19380
tgagcgggca	agagaaaggg	atgcttcctg	tgccgaatct	aacaaacgcc	cttgtcctgt	19440
agactctaac	aaccctgaag	atgtggaaca	acgtatgcgg	gaattgatca	tggaccctct	19500
ttcattatca	ggggtagaag	attctctcgc	tatcgaaaga	gtacttcaaa	atgagattat	19560
attcacaagt	cttgctacca	atccaatttt	caatgccgtg	ttaggtgctg	aaaaaggaga	19620
tcttggaaga	tttatcgat	taaataacat	tgtaaaattt	atgaatatga	ctattgcttg	19680
tctagtggac	ggagatatgc	ctatgcttct	agactcaaga	ggcaagacaa	aaaaccttct	19740
agaaaagggt	acagtgaaaa	acacgagaaa	atttttcaaa	ccaaatatga	ctgcagcaga	19800
attgaacgtg	gccactgctc	aatctgcagg	acaccaatac	atgaacgctg	gtcattgtctc	19860
agaacctgga	atcaagcaaa	gtttactccc	tatttgtata	atgaaactga	aatccatcgc	19920
catggaaaag	ggtcagaggag	ggagatcggc	ccttcacaga	cagaaatgtg	accatgcctt	19980
ttgcaagatg	ctgaagtgtt	tattcttcaa	tattgacctt	tcaaatgctg	cagatacatt	20040
tattgacctt	gcgtcacgtg	ccaccttatt	taggcttgat	gatctttgta	gggataggaa	20100
aaaatacaag	aacattgact	gggtaaagga	tttactagac	cctgtaatga	agggaaacaaa	20160
taaatgggtg	ggaactggag	aatacactaa	cattggacgt	gactcaaacg	tggccgcccc	20220

tgttgatttt	tacacaattt	tgaatacac	aatgattgat	gatggtgtaa	taagtgttcc	20280
ttcacgaaaa	ccaaatgacg	tgtattacag	tactattgaa	agagcggatg	acttactcac	20340
cgagagcagg	gacgcttcat	gtgaaagcta	ccgcccagacc	ttgtttgacg	ccagagcggg	20400
gttggaagtc	aacgggagacg	gacgtgtccc	ttacccttcc	agtgaaccg	tagaagactt	20460
gggaggagaa	gaagaagaag	aggaaataac	aggcggttatt	gacgacagta	ctgaaataga	20520
agacgttcaa	gtacaggaca	gtaatctatt	cgatgtggaa	ttattcgata	tccctgaaat	20580
agaacaacat	caacagggtg	gagaagaaga	ggaacttccct	tcagcaatat	ctgaagtgtt	20640
tgcttcatta	ccagctgata	acgattccctc	ctcaccgcg	catattccct	catttgggaa	20700
ttctgaggag	ggggaaaaaa	gtccagaacc	gtacaatatt	tttgattctg	ccctcgacca	20760
attattggat	ttaatagata	gcgatggaag	aaacaataac	cctaaaagag	tcgactggaa	20820
cagtgtcacc	attcaagaat	gaaaatatta	ccagaatagc	gtctaattac	gtccgagcct	20880
ttactgacac	gtggtctcat	ttggtcaaca	tttctggagc	tcctctaact	gctgagaaga	20940
atccaagcgc	tatcccagct	aacgaactga	atagatactg	gaccaaact	aacgtgttat	21000
gcaacccact	ctttaaattg	gaggaccaca	taacgagga	tgaagatact	ggtacaataa	21060
cactaaaatt	caaaatgtat	atagatgata	aaaatggact	atatcagctc	gccgttttaa	21120
tgctggctct	cgattcggtc	gtttcgcttg	catcttttct	ccatggagct	gatttgggtt	21180
ccaataaaaag	tgaaaacaaa	ttctgcgtaa	aaattcccca	cgacactcgc	gctgaatctt	21240
tactgaataa	tggttgattc	cccgtctgat	taagtgggcc	ttttaagaga	tggagcatta	21300
actacaagcg	tgcaaaactg	agcggtaaaa	gcggtataga	tggcctttca	ggttccatgt	21360
tgacagtact	aaaaataaac	accaataaaa	gagcaactga	tattttacat	ttggtgataa	21420
atgtttctgc	ctctgcacaa	caacttgacg	attctgaaat	gtctcgtact	tttaaccacc	21480
aaaagaaagt	tggagtttgt	tatgatataa	atgtgtccag	ttcaaggcaa	gtgaaccagc	21540
gtaatttact	ccaccatcag	aataataatag	gacaacatct	gatcgaattt	agaaccaagc	21600
aacttgaacg	cgcacaaaat	aaaaaagtca	aggaagagga	aaatggtgag	catgaagaaa	21660
tgacaagtga	ggaggaagaa	gaggaagatg	aatatgaaga	aggaggttgc	ctatcagata	21720
ttgacgagga	agatttctat	gaggatgggt	acgatgaaga	agagggcgat	gacaatagaa	21780
ctagaaagaa	gaagaaaatg	gaagaagatg	aagaggatga	agaagaagaa	tatgacgatg	21840
aagaagatga	agaagaggca	gaaacttgtg	gtgctaattg	tgttattgat	tgtgaagacg	21900
atgcaatcat	tttccccaat	ggacaaaatt	caaaaaggaa	gaaaaatggt	aaaaaaacaa	21960
acattaaaaa	gcggtcacg	aggaaggggg	agtgtctctgc	taacacttta	tccttttgtg	22020
aaaaatacgt	tggaaattgt	aagagcctag	gtataaagcc	agtagggtgt	ccgccccctt	22080
ccactgaatt	tacttcccta	tttatgagg	ggagtgaaagc	tgacagctgt	tataactact	22140
gtcagtcac	cagaggggct	agccgtataa	ggtcactact	caataaaatac	tctgttaaag	22200
atttgatgca	ggtaaacagc	ccttcgagtt	ggaaatgggc	taaccctccc	gaccgacggt	22260
tcgtgctggt	tgataagaaa	actaagggaag	aagttgaggt	taagtttgaa	attgaatgtg	22320
aaaaatccga	gtattttgat	gtcgtatctg	aactccctag	taatattaaa	gtatgggttaa	22380
aagagacggc	aaaaataata	aaacatttgg	ctctgattga	agactttctt	ccagctattg	22440
gtgctgctac	ccccaaaatt	cccctcaatt	tgattaaaaac	tatgacgagc	attttctctg	22500
ttagagatat	tggttgattt	aaaataccag	aagaagtgtc	cagttttatt	cctatagaat	22560
ggaagacatc	tatttctgca	atggggctcc	tctctgtaca	atttgatcgt	ataatagaag	22620
tgatagattt	aatgataact	aatggcgctc	ttgcgacgtc	atgcttgaa	aacgcattct	22680
tcttgaaaag	aggagtgggtg	cccagagatg	ggagtaacac	gtggctccac	acggaccttg	22740
tgcaactctc	cacctccata	tttagaagta	ttcgcaacag	aggagtgaat	attggcggtg	22800
acaacaacac	tggtagcaat	tcttctagtt	cttcttgttg	agggaataag	ggcgattatg	22860
gagtacgttg	tggattgagt	ataagcaagc	gtggtataac	cctgaaacca	ccacctgcag	22920
cgatgactaa	ttcttcttcc	ccgtcatcct	cggccatgat	ctcattgcct	cagcccacgc	22980
gccagagcat	agatctttcg	ataacgacaa	tcatccaaga	tttctcagaa	gtttctggga	23040
aattgaggct	taattggatta	cagaaaaaca	tgtctgacaa	gagcaaaagac	gtgttttaag	23100
atgcaatata	cgactctggc	gcattcaagat	cgctcctaac	atgcacagtc	aacgataaaa	23160
gtagacgtaa	aggaaaaaga	aggactttat	tggcatctgg	agagggtgtg	gtacgaagaa	23220
acctgatggg	gagtcagggc	aatgacgtca	atgatgccca	ccagttccag	gaagaatgcg	23280
gaataaaaaat	tgggggcggg	gcttctaggg	tgtataaaaag	agcccagcgc	cgaggttcgg	23340
cagtacgttc	cagaagaaga	gtaaggaaca	aacccaggtt	tactatagca	gtctctgacg	23400
aagacgacga	ctgcgaagaa	gaaggcgact	tttcttccga	gttaaatcca	acgcactctc	23460
aactacttct	attccaacaa	cggcaacaag	atagctgcac	agaagacgac	gacgttttag	23520
tgtctgtaga	agaatataac	aacagagtaa	gcggttcttc	caccacagcc	ggagacagag	23580
ttcttgcaaa	ggatcttctc	tctactgtat	ctccgaacga	aaagaggaa	tctgcccggc	23640
tcgccgcact	caccatatcc	cggcactctc	ttttcaacgc	tctatctgca	aaaacaaaagt	23700
tgggagaaaa	tggacgtttc	tccctataag	agcactattg	actaccacaa	cattgaagat	23760
atggacgatc	tccagcgcg	cacctacaag	gatcgtatgg	agacggaatt	ggtcctcgag	23820
atggctaaga	aggaggggaa	gtacgtccga	tcgttggcca	ccatggacga	attggaggta	23880

cctgaagaac	cagccacttg	ctacacttgc	ggctacacct	ttatttagacg	cagggcacccc	23940
ccacccaaac	gcaagtcaat	attcagagag	ccttgcgctt	acccagaact	tctccccgat	24000
gcaccatccc	ccgtccgttt	agaagagctt	gtcgacgtgc	cagaaggagc	gagttttttc	24060
acctaccctc	cctacgacga	cggatcttct	acatcgtctt	cacaagccga	atgtgaagat	24120
gattatcctc	caccatacga	cccatcagaa	aatccacaga	ggtcccaagt	gtgtgattat	24180
tgtaccacac	gtcaagtcc	cagttctatg	acggatcacg	ccagggccaa	cctcataaaa	24240
aatctgaaga	gggagaagaa	ggccctgggt	ccttgccgtc	gcaacaactt	tagctactag	24300
ggttgtacaa	gaagaaaata	ggattgattg	tatcgatgac	gaactttgca	tggttttgac	24360
cattcttttg	cctgtcgagt	gtacatagct	ttatatattg	caataaaaca	gaccccgaa	24420
gtatttttgt	gtattcttta	ttactgccta	tttttatggt	ttaacggaaa	aaatttttga	24480
aaagtttttg	agatggagat	gaagggaaaa	agagggcgct	agttcatata	ctgccccata	24540
gggtggtcgg	tccagaaacg	tctgtctggt	ccagaaatgt	gtttagagat	ttctggacaa	24600
gtcattttctg	gaaagggttg	taattttatta	tagttgggtat	attattttctg	gtatacattt	24660
ctagctcctc	tctgtaactt	gacgttgggt	cgaccacg	gtccaccctt	cgaacttgac	24720
ataaggccta	gtcagcggtc	caccccttaa	actggagtga	gctgaaaaaa	tttttgaaaa	24780
gtttttgaga	tggagatgaa	gggtaaaaag	aggggtgaaa	ggatagctga	ggccacctgg	24840
gtcagccgtg	ttccagaaac	gtctgtctgt	tccagaaatg	tgtttagaga	tttctggaca	24900
agtcattttct	ggaagggtt	gcaattttatt	aaagttggta	tattattttct	ggtatatatt	24960
tctagcccct	ctctgtaatc	tgacgttggg	tcgacccagc	ggtccaccct	tcgaacttga	25020
cataaggcct	agtacgcggt	ccaccctcta	aactggagt	agctgaaaaa	tttttgaaaa	25080
gtttttgaga	tggagatgaa	gggtaaaaag	ctagtaatag	aaggttgtgt	aactcgcat	25140
aaccagaaaa	catatatcaa	aagggtatgga	aacaactatt	ctttttatac	agtagtttta	25200
ttgtaccaaa	aactcagaaa	tctcatcaca	tgacaaatct	gaatgtccca	ttccgtggcc	25260
ctcaataacg	tacgacactg	gacctgggaa	ctcccaccta	catgttttac	atacagaaaa	25320
ttttgctctg	atgcatttat	caacaaacac	ttttaccaca	ttggcattca	ttctcttcag	25380
tttgtcacac	atccacaaag	aggccatatt	ctccatagaa	tcagatccat	caacaaatat	25440
atagaatggt	acacccttgt	cgatccagtc	catggcgaca	atagtaaagt	cttgtccaaa	25500
aacactgttt	ccgaagattt	ctttgtcccc	atccatgtat	tgggaaaaag	tacagtatgg	25560
tccacagtcc	ttgatctcct	ccaaccagtc	gttcaaaaaa	tccctaataa	agaaagacag	25620
gcaattcgac	ttgatctgga	aaccaatggt	gagtttcttc	gtattttctt	cattgttggg	25680
ggggaagaaa	tacgccaatt	gtgtatctgc	tcacaaatgt	ccacacttcc	ctttatggat	25740
caggcggttc	tccataatct	ccttgccaga	attggggagt	aggccttcga	agaacaggat	25800
attggggcgg	gtaggaactt	tgccagtcaa	gtccatgttg	gcaaagagat	cagcagggtc	25860
ttcaaagact	gaggccattt	ttttggttgt	tgctgctgag	agaggagcaa	gtagtagtgt	25920
ggttactagc	aaggagctca	cagtcttata	tatagactaa	cacccccccc	cccaaaaatt	25980
ctcccacatc	tttcataccg	gggtcggcta	gaaccagaaa	acggtttgac	tcacatctgg	26040
tacattattt	ctgttatata	tttctagccc	cttcgtgtaa	tctgacattg	ggtcgaccca	26100
gcggtccacc	cttcgaactt	gacattcgat	cgactcagcg	gtccatcccc	taaactggag	26160
tgaccagaaa	aaatttttga	aaagtttttg	agatgaagat	gaagggggaa	aagggttagt	26220
gaatacaggc	agtctgcct	tgctccagaa	atgattctaa	agatttctgt	gcattatttc	26280
tggatatacat	ttctagcccc	ttcgtgtaat	ctgacattgg	gccgaccag	cgggtccaccc	26340
tcggaacttg	acattcgatc	gactcagcgg	tccacccctt	aaactggagt	gaccagaaaa	26400
aatttttgaa	aagtttttga	gatgaagatg	aagggggaaa	aagaggtg	taggggtgcg	26460
tccagacatc	ctagagtggt	ctagagccca	gaaacatccc	aactagtttc	tgggacattt	26520
tttctccac	tgacgcagac	tatataagct	aaccactaag	catattttgc	acacatttca	26580
tccaccatca	ctgccgaata	cactcttgtg	ttgctccgca	tagcctaaca	atggcccaaa	26640
actccttcca	gaaatttgct	ccagttatca	agactgagaa	gaaggaaagaa	gaaagggatg	26700
aacatgacga	ccctttacgg	cagattgatt	ttagagatag	aaagacatta	atctgcctca	26760
ctgcaaaactg	tgtttcgagg	aagagaaaag	ctggatctgc	acatgatcga	gtatacaaaa	26820
tactacgcta	cgggaaccca	tacaagtacc	gtcgcccaaa	tagaacacat	cgaggattgg	26880
ccctctcaat	ggatcaaggt	gaagtaggaa	catgcctccc	tctgcgaccc	atggaagaga	26940
ctgaagaaaa	ccccatcgac	aagtgcggag	tggcgttcct	gtactccaac	tacaatgaag	27000
gcgatggcat	gaccacctt	tacaacgacg	aagagtatat	aaagaagtgc	aaaacaattg	27060
aaggaggaac	aagaacgtgg	gtaaagaaga	accgccaaga	atacttcaga	caagctctag	27120
agacattgat	gatgtcccat	tctataaaa	aatattccaa	ttttattttt	ttcaaggagg	27180
atatggagg	aggattttgtg	cacaaactcc	acacatttat	taatatggta	caccctaaaa	27240
aggtgtctgt	tttgtgat	aataaagatt	gatgttttta	taaatgaaac	gtattatttta	27300
tacaaaaaaa	tttattatga	tgtatttcat	tgggatggct	tttactcac	caatctggcc	27360
tatgtgtgtg	ttcatgctag	cccctctttc	acccttcac	tccatctcaa	aaatttttag	27420
aaaatttttc	tgggtcgctc	gagtttagag	ggtggaccgc	tgggtcggcc	taatgtcaag	27480
ttccgaggg	ggaccgctgg	gtcgacccaa	tgtcagatta	cagagaggg	ctagaaatat	27540

gtaccagaaa	tagtgtacca	gttataagaa	aatgtgaccc	tttccagaaa	tggettgtcc	27600
agaaatcttt	gaaccattt	ctggaacaga	cgtttctgga	gcatggtcga	cccagatatc	27660
tgttggcggc	tgtaaatagt	agcctatgta	ttcaatggtc	ttttaccctc	ttctccatct	27720
caaaaaat	tagaaaaat	ttctgggtcg	ctcgagttta	gaggggtggc	cgctgggtcg	27780
gcctaagtgc	aagttccgag	ggtggagccg	ttgggtcgacc	caatgtcaga	ttacagagag	27840
ggtctagaaa	tatgtaccag	aaatagtgta	ccagttataa	gaaaattgtga	ccctttccag	27900
aaatggcttg	tccagaaatc	tttgaaccca	tttctggaac	agacgtttct	ggagcatggg	27960
cggcccaggc	agcctcacag	ttacctgttc	acacccttcc	tactagcacc	ctctttccacc	28020
cttcatctcc	atctcaaaaa	tttttaaaaa	atttttctgg	ctcactcgag	tttagagggt	28080
ggaccgcttg	ctcggcctaa	tgtcaagttc	gaaggggtgg	ccgctgggta	ggggccattt	28140
cagattacag	agaggtgtca	gaaatgtata	ccagaaatag	tgtccgatta	ttaaaaatgt	28200
aacttttcaa	catgtgtgcat	acaccgtatg	aacgtatagc	caaatatgta	ccacagtcaa	28260
aacatttagg	tgagaaaagt	aatacacatg	tataaatttc	aaatacttta	tttgcataca	28320
taataaaaaa	tcatacagtt	tgggactcat	ctgtccacac	atcattttatt	aggaactggg	28380
atctattata	ccctattctt	ctacgtttac	aagatacttg	ttcatcaggc	actgccattc	28440
ttttacaaga	cactatttgg	tcaaccaaca	tctctttaac	ttgatcagcg	tcaggttctta	28500
gggaagtacg	ttctctgcat	acaggacacc	gggttaatttc	tccacgttgc	gtactcaaca	28560
ccaattctgc	ccaacatttt	tcgatcaatac	aatgtccaca	gcgtgtcgtc	ctgatgat	28620
tggtactact	gaaatcttct	aaacacactg	gacaattatc	gctgtcgaaa	cgcacattag	28680
cattcttctc	atgttcttct	agagcccttt	taatttcttc	cttatcccca	gaaattatgt	28740
gttcagccca	aggataat	gaggatgcaa	tataccccaa	gcgacaattc	agtattggcc	28800
aagaacgagg	tgctttat	acatcagagc	cgggtggcagc	aacaaggggg	tcttcttctt	28860
ggagagagaa	atctaaagca	gctttcaata	tggtgggtat	actaggtctg	tatctctctt	28920
gggcaaatcg	tgtaaatgcg	gtatcattga	acatcaataa	tgtgtcttca	gttacactta	28980
aagtactaga	tttaccatac	aacatattaa	tctttgcccc	atggggtcca	actagtgc	29040
cagagacatc	gtgtttgtga	ttggcgatgg	caatcattag	ggcggttgca	ccatcgctcg	29100
ccttctagca	ttcactatac	ttctatcgaa	atcgtatatt	atattcttgt	attttttagc	29160
aagagcatca	agaaaaattg	acgaggttgc	aacagctgca	gcatggaata	cgttttctt	29220
attttcat	ataaaggaaa	aggccaaagt	gtttgttgtt	agaatttcaa	tacctactct	29280
tgtgttaaa	ggggaagata	ttgcagcgca	aaccattaga	ggtgacatgc	ctttcgcaga	29340
aggcttcaga	atgttaagtt	tttcttgttt	gactagtttg	ctagtatggg	aatatttgtt	29400
aatgatacaa	taacacaata	gagtattccc	cttttcatca	aaataagtg	gtttgagcca	29460
cggattcttg	gtaagaaaag	cttcaagatc	ttccatgaaa	cacgagactt	ttacacacaa	29520
tctaacaatag	ccttttaact	catgagggtc	tgttatcaca	acgtttttat	gtgatcacat	29580
ccttttcaca	ataagattat	cgcacagttt	gtcgttcttt	tttcttacca	taattctcct	29640
caaacagatc	ttgaagtaat	tgtaatcaat	ctcttcaag	ggctactgtg	taatcatcca	29700
caacagtatt	gcaccacaca	aaccactacc	cactgcttcg	ttatttgcaa	catttttttag	29760
aatattgtcc	atcatttcgg	cagagaattt	tggtatcggt	tcaaatatac	tgtaaagggt	29820
ttgaaaatgc	tggtattgtt	cagccttctc	tataaacaca	tcaacaaact	ctactgccat	29880
ttcagcaaca	gtttttgtag	tagtctcaca	gtactcttct	accatttctt	cttctatcga	29940
ggaaaagaaa	gacttgataa	tcacactcct	gtaagcacta	gccctttctt	cgttggtcca	30000
atccaatcta	gctatagatc	tagcgtccat	gttcatttct	tctctgaagt	cagttgacac	30060
ggatgatggg	gatgtttcta	ggcaagaaaa	aggctctccg	ataataaaat	tgccattgga	30120
tatcagtcgt	tttgcccttg	taacacaagg	agattcgtcc	acaaaatact	tgtatccgaa	30180
agatatgtca	aaagggtcaa	gtggtgcaga	ttttttcatt	tcagccacgt	aatcagagg	30240
gatattgacg	attcttgaaa	agagcctgaa	tctaataaca	ctcgaacatt	tttcaacgta	30300
gaaaacaata	ccacttcttg	cagaactagt	agacttttct	aggctagcca	aaacaccgtc	30360
caactctctg	atccttctca	taaccttctc	tcttttcttc	tcagctgtgt	cctttgaagt	30420
aaacttgaat	ccagttctgc	tgtcatcacc	agtccaaac	ttgatgccgt	gcgtctcgcg	30480
tctcaaaaat	ccattatcca	tagagaccag	aagagaatat	tttacgaaca	aaaagtcgtc	30540
gtggatgttt	tcgtaaaggc	ctctgaagg	tttgacagcg	gttgtcaatg	cgttgataaa	30600
agtattccc	tcgcagatgg	gggaagaatc	agacttggt	ttgttgttga	taaagaagta	30660
gataatatct	ctaaactctt	ctttattgtc	taatttcttg	aaactactt	aagggaacag	30720
aggagaattt	ctggaggtaa	ttaatgtcatt	cagaagggcc	aattcccttt	ctgtgaaaaa	30780
tcgcagaaat	gacatatatg	gttcaatgtt	ttcaagtact	tcttcaagca	cctgacggta	30840
tcgtggagct	gcttcagcca	tggtgatgat	gtctcacata	cgactgttga	gtttatccat	30900
gcgtacgcc	gcttttatac	aaagatccc	tgtaagaaac	tccctccggt	tcagttcagg	30960
ataggggtgt						

tgagggttctc	tcttcgagac	gacactattc	cagttctcac	taccaagaaa	attttctgga	31260
gaggagtgtg	ggaagaactc	ttgtggttca	tcaggggcaa	tacagacgcc	aaagaattgg	31320
ccaagaagaa	gatacacatc	tggaacgcta	atgggtcgcg	ggaatttttg	gacagtagag	31380
ggttatacga	tagagcagag	ggagatttgg	gacccgtata	cggattccaa	tggcgtcatt	31440
ttggtgctga	atatgatacc	tgttcttccg	attatactgg	aaagggtatt	gatcaattgg	31500
ccaatatact	aaagaccctg	agagaaaaatc	cagatgatag	aaggatgatt	atgacggcat	31560
ggaatcctat	ggatcttcac	cttatggctc	ttcctccatg	ccacatgact	gctcaatttt	31620
atgtggctaa	tggagaattg	tcgtgccagt	tgtatcagcg	aagcggagat	gtcgggttgg	31680
gcgtgccctt	caatattgca	tcatactctc	ttctgactca	tctgatggcc	agtatggtgg	31740
gtctaaaacc	gggagagttt	atcctcactc	ttggtgacgc	acacatttat	aatacccaca	31800
ttgaggtgtt	aaagaagcag	ttgtgcccg	tccttagacc	attccctaag	ttgaggattt	31860
taatggctcc	agaaaaaatt	gaggacttta	ctatcgacat	gttttatctt	gaggggtatc	31920
aaccacacag	tggaaacttg	cagatgaaaa	tggctgtttg	aatcatgtta	aggaatttcc	31980
ttgttactca	tttattccta	gaaatgggtg	aatcgctgtt	gtgggcggag	catatttgtg	32040
tatataagag	cccgtgttag	ctcctcgatt	cagtcacaa	agcgcacaca	cacgcttata	32100
actagctctc	tctctccact	caagatggcc	tttaattttg	aagactctac	aaatctcttt	32160
gccaatatgg	acttgacggc	tggcacaaca	acagacccta	cccgcctcaa	tatcatattc	32220
tttgaaagtc	tactcccca	ctctggtatt	gaggtgatga	agaggcgtct	cgtacggcaa	32280
ggaaagtgtg	ggaattttga	agcaagtggg	ggtgctatgt	cgtatttctg	gctcgaagat	32340
aatgcagaag	atatggagaa	tctcaacagt	ggttcccatg	tcaagacaaa	ctgcttggca	32400
ttattccttc	aagagtttat	cagcaactgg	attgaagaga	ctgatcgaca	tggacagtac	32460
tgtacttttc	cccaatacat	ggacggtggg	gatggttcac	gtgggggata	ttttacttcg	32520
ctagccatga	aatggatggc	tagggatgtg	actttctttg	tgtttgttga	taggaataat	32580
actgtagaaa	atgcggcatc	catatggatg	taccaaaaa	tactagcaat	tgggtgcaaa	32640
gtagtaaagg	tgattgttga	caatgcatca	aacccaatgt	tttctgtatg	taatgctgtg	32700
aggtgcaagt	acccaggccc	agtgtcatac	gttattgaa	gccatggagt	gggtcatctt	32760
gatttgacat	gtgatgagat	ttctggattc	tttgtataat	aaaaccccat	aagaaacaa	32820
aatctttttt	attcaacacc	catgatttta	gtttttatag	tatataaaat	caagaataaa	32880
gtatgtagat	gtctactttt	cgatagctcc	ttcacctata	tagaggaggt	ggataaaaa	32940
agaagatatg	gattctaata	cttctatttt	accgccaagc	aaacggccag	ggttaaatct	33000
gttacagggt	ttagggatta	taataacggg	agcattaata	gcttccgttt	catcctttat	33060
attttatagg	taggttaa	gcaaataata	ccctcttcca	tcctcttctc	cagaattatc	33120
tgatgtagat	aatggggtag	aaggaggagg	aggaacaaca	acgacacca	ctcaaccttc	33180
acctgacggg	ggagatggat	acgtagatct	ttctcctcaa	aagaaggctg	aactaagaac	33240
tagagttaga	aacgtcatct	ttcaagaagt	gtcaaaggat	caaggagtgg	ccttttagacg	33300
ggcaatgaat	gattcaactg	ataagataat	ggaagaaact	gaggcgagaa	tcaataactt	33360
ttcagagcca	ttcagagaag	caaccgtaga	acgtgaagtg	tttaaggatg	acacagacaa	33420
aaactttatc	ctttcaactc	tagatttaac	agaggaacaa	tttaaggaca	ttgttatggc	33480
tgaagtga	aatcaattag	aaaattttga	ctatgaagac	atgacccgtc	tcatctttga	33540
taacatccca	gagactgatt	atttatggac	aactcatttc	gatccgaaaa	aatatgacac	33600
gtactctgaa	aaggatttag	ggttctcaga	tataaatagt	atagaaagaa	tatcctctac	33660
attttataaa	ggtaaaaaat	atgaggtaac	tactggaaat	gtagctgtcc	tcgttgattt	33720
tgaatctgaa	acaataaaa	agaaggcagg	aaatagtctc	atccgtaatg	tcgagtttat	33780
tgttgtggac	gaacagacct	acaaatcttt	cttccttgca	ttcaatcaag	ttttcttctc	33840
ctttaaagta	ataaggaga	aaagggaagt	tactgtatcc	atcaataatg	gatgtgtagg	33900
tatagtggcc	aatattactc	ctctaactac	gccagttgga	gcagcttccg	gacactacat	33960
ctatggcact	agcacagcaa	aggaaaagac	ctatctattt	gtaatagaca	agtacgatac	34020
cactgaattt	gtttgtggtc	tgagtaacaa	gtcaactcct	ctcatggctc	taaatattct	34080
ctttatgagt	gatactgttt	tccttctcatt	tgacgaagca	gaaagacctc	tgacggatgc	34140
caaggcagta	gaaatttttag	gtaaaagact	aggtgttaga	agatacacia	acgccaacat	34200
cagaaatact	cagttagatg	gaaggggtta	tttggataa	gatagaaaca	attgcaaaaa	34260
gggcctctcc	tagttatggg	tctattgatg	tgggtacggc	tattttgctc	cgtcaattca	34320
tggaaaaaat	taggggtaaa	ataaatgaag	aaaccacaat	ggagaagatt	atgggcacaa	34380
aggaagaaa	agaggacact	ataagaagta	tagtggctaa	tgttatcaaa	gagaataactg	34440
ttaaagaaaa	tgtaaccgaa	aaaatttaga	caatgacaga	taaggaaatta	aatgacaata	34500
gggaatttat	gcatgatttt	ggaaaaattt	caactggaga	tggaggaacc	ttccatctct	34560
ttgaagatac	acccgggttt	gaaagtgtct	ttaaaggcaga	atataaaaa	gttccaggag	34620
caactactcc	aaaatacgt	tctatgaaca	gtttacgtat	cgatgctgatt	aatggaaaaa	34680
tcgaagaggt	ttataatcct	tcacctatca	tgggtattag	agaatacggc	accattcgca	34740
ggggcaggta	cgaagaaaat	gcagggttca	aagaattggg	ttttatgacc	aagattgaaa	34800
aaagacccaa	taatgtagct	gaaaatctca	ttattagagt	tgccaaccag	cagtataatg	34860

ttatgaggat	ggtgtttttt	atagactacg	aaacaaagaa	gggggtgtcc	aaggaggaaa	34920
tgtttatacc	atataatggt	cagaaaacaa	aggctcttaa	agggcgtagt	acttactttt	34980
cattcgtaag	gaaaattcct	gatgaaccag	aaggaggtat	cataatacac	gcactagggt	35040
tttattgagg	aaataataat	aataataata	ataatggcat	tacaggaaaa	ggatataact	35100
ataggggaatg	tttctgctgc	cctacgagag	ttgatgtact	caccacacac	tatgcagcat	35160
cacgataagc	taaacacatt	cctggacaga	aatggtgaat	catcttcaga	agagaaaaata	35220
agacaaattg	tgataaaaat	acgatcccaa	acaacatctg	acatatctga	aacagtcaat	35280
aatgtcacaa	ctaattgggac	tgcattttcc	cttttcgaag	ataccttaga	aggtatgggtg	35340
aaaaaaaaata	taggtgataa	ccttcagagt	ggggacttta	ttgatggccg	taaaaagctc	35400
aatgacatga	agagtctagc	tactggagcc	atcttatcta	gacagcgaga	ttttgttgca	35460
gaaagtataa	caggaacaaa	ggactggctc	aaggctataa	tggtgtgtgg	tattataagg	35520
tatactgtat	ttgtcaataa	ccttgcaaga	tcaacactcg	ataatgatga	tgacaaggca	35580
gcaacctatt	ataacacccc	tataatggc	gggtattgta	aaatggctat	aaaggactat	35640
gaaataccag	attcgtacag	caaggtcgaa	gcggaacata	cagttgaagg	aagaaagatg	35700
acctttaata	taaaatggag	aggcgatacc	ataaacaacc	taataacaat	catcccttca	35760
gtgacaggtt	atcttgcttc	catctctgaa	gacgcagatg	tgacggcgcc	attactttta	35820
aactgcaaca	actgttttat	agaggcagat	atgagtagcc	tctacatgga	tgagaaaaaa	35880
acagaggcat	cattttaccct	caacttaccg	gaaatcgaag	gagctgatgc	gaatgcagtc	35940
tatgaaatat	gtatagtagt	agtttgatgg	aggacaaata	aaaaattgga	tacattttcat	36000
gtagttttat	ttaactctta	atcttatata	catttcatgt	acatttcatt	aaaaatcact	36060
atcagagcta	tagtacagaa	actggtgctg	gagctgatta	atcctcctgg	ccatgacggc	36120
agatgtcttc	cgtgaagtgt	tgctctgcc	gtctctgacc	ctatcaacca	tcctacctga	36180
acctgggttc	aaattaacat	ttggtgcata	aaaggggggtg	tgaagagggtg	aagaataagg	36240
agaaggatca	ggactagcat	catagtccct	cacaatcctt	gttcttcccc	ttctaacagg	36300
tggtgatgcg	ggagggggca	tattagccgt	gtctagcaac	tccaacatct	gtgcctggtg	36360
ttcaagtgcg	ttagacacaa	acctctcagt	gtcttctgct	tcattgtcat	tattaggaat	36420
aacaccataa	tcttccatga	gggcgtcacg	ccttcctgcc	tgatgcctct	caaagagccg	36480
ttttctttcc	tcagggtcat	cagagaagag	tttgtgaacc	cagcatgggt	tcctagcctc	36540
ccctacagcc	aagtcaggca	caaaaactgg	cttatttttt	acattcttat	agggagaag	36600
agggggcaac	accttgacag	gagcaggagt	ggggggtaaa	ggagtgggtat	attcaccctt	36660
atatgaacta	ggtttatgga	actcctggca	aggtattttg	ccctccctgt	cctcttttag	36720
aggggcggcc	ttacagcctc	caaaaacctt	cttagctatt	ttagtatgca	ttttctttag	36780
ccttttcata	ccttcagaca	acatcatgaa	cccattctta	tcaaactgaa	aacccctcaa	36840
gaaaaactta	taaaaggact	tttcatctct	tgcaagaaga	catcccgcga	ttagccta	36900
tgactcaaaa	acatccccta	tctccccttc	cccatacttt	atttcaggaa	acctattgag	36960
tgctgagcag	gtactttcta	tagatgctct	cagagcatca	ttttccaagg	ttgatgagct	37020
ataatcaacc	ttcttacagc	tggcacactt	cttaaccata	tcctttattt	ccattctttt	37080
cttatgtttc	ttcatcattt	ctgatgaaga	ggaagttttg	attgatgtct	taaagacgat	37140
attcttccct	tttattgtct	ttcctttctt	gctgacgata	caccctccct	tcttgctgct	37200
gctgctgccg	ctgctgctgc	tgctgatgat	gtcagttccg	gccattttta	atgactctaa	37260
aaaacaaggg	ggttaacacat	gtaataaaat	gcattataat	gtaacattct	tttattttaa	37320
taaaaggcag	tagaaaattt	gtacatcatt	tacaggcagg	catatacaaa	aacacatcac	37380
tttatagatt	gggcagggaa	gatatttgat	cagcttccga	agggtcagta	tcaaaccatc	37440
tcaacaatga	actgtgtaca	tgtgcaattt	ctagatccaa	cctagcatta	tttagggctg	37500
acttaatgag	acaggaacca	attagctgct	tattagcact	ccactttgaa	gcgtacttac	37560
gcttcacctt	caattttcta	gagcacaaac	tcttaccat	tacatcattg	acagttgtat	37620
ggaacaggtt	acctctagat	atacaatctc	caagcttatt	ctcagtttcc	tgtctccttt	37680
ctctaagagc	agaaagtcca	gccagatacc	tattggcaat	ctcattatac	tcctcatcaa	37740
tattatcgag	tctacacata	tacctcttga	catctacaca	cagtctctta	ctctcagagg	37800
aaatattaga	catcctgtcc	tcgtcacgcc	cataccttgg	cctctttcta	ctgttactac	37860
tactactact	acttcctgag	gaagtagagg	gctgattcac	tgatgacgaa	gaagggtatta	37920
cttcttcgtc	atcagagtct	gaatcaacat	taaaacaaag	gttaacatta	atgttaagag	37980
aggttgaggt	agggcgagat	gaggtagggg	cggatgacgt	agaagcacta	ggcatattca	38040
agtcaggcaa	agacattgtg	tcatcatcat	catcatcatc	attaacatca	taaagtgaac	38100
tactaatacc	actaatagta	tcaaaggtaa	tattgttact	tctaggggga	acagtcaagt	38160
caggaagtga	ctctgagtca	tcattatcat	ctacctctgg	ggggacaaac	actacagtat	38220
cctcatcatc	ttcaatgaaa	ttgaaggatg	tcacaccaga	caacaaacta	ggggagacat	38280
tattatcacc	ttcatcatca	tcatcatcat	tactcaagca	ttgagtaatg	tcaatagtat	38340
tgggagctac	atacttaagc	cattcacctt	catattcata	aggggggata	tccttgaatt	38400
tacccattaa	agctgcctca	tgattatctt	caaaggtctc	ttcactgaat	gcatgcattt	38460
cctgtctaga	tagagtttca	agcatgaaac	tcaacttggg	ataagccctc	tccatataaa	38520

catcctcatt	ctcattaaca	cctttggcat	tggggacaaa	gaaagtaggt	gctagaatag	38580
ttgacatcct	attaagggtg	tccttttacac	cttcacatt	aacatagtc	gcagacaaca	38640
aaaatgagtg	aaaagaggca	tactttgtaca	cctcttcata	cacttttacg	aagaaccaca	38700
cagggggtat	ataggcccta	cacatgggac	ataacaggtg	atcttcattc	accatatgct	38760
cttcaaatct	ccaggtgaaa	agacactcca	ggtggacact	tttcctgcaa	cacggcatcc	38820
ctccatttga	ccagttatag	caatccgtgt	ccgaatcgta	atcacccata	cagatgggac	38880
aggtaggcac	ctcatcaacg	gcgacggttt	cagccatctt	gttgtgtgtg	ttgtttactt	38940
taaagagggg	gaaaagccaa	cgctatagca	actcatttct	ttactttaaa	caggttcatt	39000
acagtccctt	taaaagggaa	tatgtgcttc	atggcaaggg	catattctgt	gattgaaggg	39060
cgattttgat	agaaatcagt	gtctgttccg	ctttgcaaca	acatcaaaaa	gtgcatgttt	39120
gacatcaaat	taaaggcagg	gccttccatg	ttagaacaag	caacaacatc	ttccagtata	39180
ctggaagcca	ttacactgaa	actgtacgtc	attgaatagg	cacctagaca	gtgtccccta	39240
aagaactcgg	gaggtgtgtg	aatgtactgc	ctgattagtt	cttcctgtgt	cctaaaaaat	39300
tcactggtgt	aacaataaacc	tagagggtat	gagagtccca	agtcaatcat	tttaggttgg	39360
ccagatatgc	tatctataac	aaagttatca	gcctttatat	cgacattaat	aattccctca	39420
tttgcaactc	ttgtaattac	attacaagtc	tcagccaaaa	caaaaggcat	gttcaccttt	39480
agtttttcaa	acatacttct	tacaaccttt	cgggcaatga	aagagtcctg	tattggtgcg	39540
actgtatcaa	ccccctttac	ctctggtaaa	cgctccatcc	tttgaagcat	gacaacccca	39600
tacaacaagc	gtgcgtccct	tgactcataa	tactccccac	catctaaact	atccttgaca	39660
ccctaattga	catcatcaat	actgatacct	gcaaatggca	tctctaaaaca	taacccctga	39720
ggacacacac	cagtcacccc	aactaccccc	ttaatatctt	ttctgtatac	agaaaggcca	39780
ttaacacact	caaaaacaaa	ctcttcatag	ttcatatcct	tcataaactt	gacaacagtc	39840
cccctattca	caatgtaata	gaccccatat	ttaatctcaa	aaaaggctct	ccaggggacag	39900
atgaaagtgt	taaagtcctt	cacatcttca	ggcacttcga	ccaaatcaga	caaacaacca	39960
cgagcagttc	tacggaagtt	ttcccagttc	tcacactggg	cagaaacttc	cttaattagc	40020
ctctgtagtt	tttgtctaata	tcgctcacag	gcacttgaag	gcaattggaa	cacctctaca	40080
gccatataca	ttatgtccat	aatctgggag	gacggaatat	tacgactaga	caactcctta	40140
agaatgtgtc	tagtgtcaaa	aaatctcatc	tcttcatcgc	aagaagaggt	gggccaatag	40200
aagccaactt	tagggtcctt	tccatagaaa	caggtatcat	ggacataact	gctagactta	40260
acaattgacc	tatggccaat	tctcaactgt	tgacaggtat	cataattgtc	ctcaagacta	40320
caactcttct	caatgccttt	aaagtagtaa	ggggaatcac	gttcaatcca	ctcattatac	40380
tgctctttac	actgcctaata	caccttgga	gcacacagtc	ttgaaaagggt	gcgagtagtg	40440
ggaggagagg	gagcaacttc	agacttcttg	aaacgtttag	ggggaggggg	cgtgatgcta	40500
aggttgatga	cgatcatcca	agtcttgata	gtgatgttgt	tggtgttgtt	gttgtaagcg	40560
ggaacagttg	tggcttcgga	ggttgaaacca	gacgcgtagt	tggtgttgtt	atattcttcc	40620
acaggccggt	ttttattccc	ctgatggtaa	acatactgct	ggtggtggtg	gtctccacca	40680
gtattgatgg	tagtagtaata	tacagtgggt	ccccccattg	cctatggaag	aaacaacaac	40740
aaatacacga	ttaattcaac	gcccggcaca	ctaataaagt	gatgtgtttt	ttatataaaa	40800
aatagcccat	aatattttaac	gttacgttaa	tcaaaaaaaa	caacaacaat	aatagtatat	40860
tattggtact	tacttttgat	gggtttggag	cggagactga	agtaaatacca	gaaaacaaca	40920
gttttactgt	tgggcaactac	actgcactgg	tgacgtagta	gtagaagtag	tagtggtaat	40980
agtccactat	tgtcactgca	ctgcactagt	agtagtagta	gtagtagtaa	gagcgttggg	41040
taagctcggg	ttggctgcta	gagctggagc	tggaactgga	gcttgatagc	ttggctgtgc	41100
ctctgctgag	actgatgctt	ctggcctgcc	cggctcgcct	tatatacaag	ttgtccccc	41160
tcacccccac	ttccagaaat	ttgccgtcga	acgccagttc	tccaacagag	tgggggtccag	41220
atctggctac	gggttcactc	ctggccatac	cctgttttagg	ggtctaaatc	cacccccggc	41280
actaaatggg	gaggacctaa	gggtgttata	acaacatgta	agcgttgggt	aagaagatct	41340
ggatctggat	gacccacctt	gtcctttctta	tcctatcctt	atccttgtcc	cctgtctacc	41400
accacctcac	cccatctcac	tcacccctac	tcacctatac	ccccatctca	cccatcactt	41460
ctatatctcc	ccaccttatt	cactgcctcc	agtttcaaca	ccctgttctt	gccagaccaa	41520
cccataacca	gatctggacc	ccagttctcc	cttttatccc	taaccggcac	catttatgcc	41580
cccaggcgct	agcgggtgat	ataaggcggc	gcggccaggc	cagaagcatc	agttctctgc	41640
aagccagcag	aagagcaaca	caacaagcac	tctctctcct	tctacctaga	agagacctgc	41700
caatactcaa	gctacaagaa	tggcctctcc	agccccgcgc	gcaccaagtc	cttacaccat	41760
gttggaactc	aggttactta	gttctgagga	actaaaggaa	ctaacttcat	acgtctcgac	41820
tagctctcgc	cggcttgata	tgaagaaaca	cttgctccat	ctattcgagg	agcacgagaa	41880
gatcttccaa	ttcatacaag	gtaagcacia	gttctcacta	tacactttgg	actttgaaat	41940
tttctatgtt	atgctgaata	ttttgttggt	tgaagtgaia	aatattctaa	gtccaattcc	42000
tttactcttt	gacagaaatc	tccaaccagt	acggagacta	tggatgtttc	acaatggccc	42060
cgctcacctt	gaacgctgca	gccgatctct	tggataaggt	gatgtccgga	cctctatctc	42120
ccgaaggcgc	ccaaacttcg	tccccggctg	cttgtgttgg	tgcgaagggt	gtgaaggcac	42180



tggtgagctt	ttgccagaag	accgcttca	ccaccaacat	tgtgatgaga	gaagttaaag	42240
ccatggagtt	ccaaggagac	gattttaact	actctgcctt	gtgtgcaagt	atgccccaac	42300
gccccgtgac	tgagaggcag	atgttcgccc	ttatgaagag	tgaggacgaa	gaaatgggag	42360
tgtctgcaaa	cttctctcca	gtctctgatg	acgtcatcaa	cccttcaagc	ctccccctctg	42420
gacaagaagt	cgactcatca	acttccgctc	aaatctcttg	tatgtttcaa	aacgtgtgga	42480
gtttgcttga	agagtgtggt	agtggctcta	atagtaatag	ttccccctgtc	tctaggacag	42540
tcttagtttg	caccctgttt	ataatccaag	tgttcaagtt	tttggtgact	aaagtgtcta	42600
atgtgaacgt	acttaaccag	ttgtttggac	atgttgtttt	tggatcactt	gatgtggctc	42660
caagtaataa	taatagtgtc	ccatcaactg	ttgttaacaa	caacaacaaa	ccctcgacct	42720
ctaataatag	taacaacatc	agtaacaagc	gtgttggtgg	tagtaataac	agtggcgggc	42780
gaagatcaaa	gaaagttaca	gccacagcca	aaaatccctt	taataatgta	gatgggggaca	42840
atcatggcat	gtttgccggt	gccccgtgtg	atgttaattt	ggatgacttt	gtttttcccc	42900
aagttgaaac	tcttacaagt	aagagcacca	tccctaaaga	agaggtaaat	gtagatgaag	42960
atttgagtaa	aatgtgccgt	aaaactgccc	ttacccccct	agaaattcat	acctttaatg	43020
tgttcatctc	tgagattaac	ccctccaaat	atgaccgttc	aatgttttgc	aagggtattt	43080
tgactgcatg	ggataagttt	gtagaggggg	atactgctgg	cgtaaacgc	ttccgtaact	43140
atatcctcac	tcgctcaaac	tatgcctcag	ccgccagggc	cgtgtatgaa	gcgtcaatta	43200
aggggactgt	ttattataat	gacaagtcaa	agtttctgtt	ccacgataat	gttaaccctg	43260
atctggacaa	gagctggggg	aacaagaatg	ggaagaaacc	tagactccca	gctaacttga	43320
tggcattcat	gggtattgac	attgtaaagg	tgtagcgtaa	ggggattcaa	aagtatatgt	43380
ttgcaaagca	attccaacat	ccggaagtgg	aagaacttgt	gcctcctatg	gctgtatacg	43440
caaaggttgc	cgcaggattg	aagtcgggga	ctttgtttga	tgactgggac	ctgcctgaat	43500
acgaaaattg	tcagtttatc	aagtatgaca	cagaagggtg	caaaaagcac	agtgaagtat	43560
acgccaaaac	acttctccgc	acaggactta	atcaatacaa	taaactggaa	gaggggacag	43620
gtgcattccc	atttgcaaat	attgtgacgg	taacatccgc	ctctagtgat	gatattcacg	43680
gtgacacaat	cattgaattg	atgtacaaga	caaaggatgg	cgtaaaggga	gtctcaaaaa	43740
ttgaggacga	aaacatcatc	aagggtgaatc	cagcagaaga	aaagaagaat	aatagagtac	43800
aagccgagaa	gacctgtat	tttgagattg	attccgatga	tgaggtgtgt	gagagaacag	43860
aggaagaatt	cttcaggcct	acatctgttg	ttgctgcccc	gacaacaccc	ctcgtacctt	43920
ctaattgtga	ggaagaggaa	gaggaagaag	agcagatgga	agaagaggag	gaagagggaag	43980
tagaaaggga	agaaggatct	gataaaggaag	atgacggaga	cgcaccagca	caggaagaaa	44040
tggaggtaga	gaagggaaga	gaacaacaac	aacagccaga	agaagaaaagc	aatggtaatg	44100
agaaccaaga	agaagaacaa	caacaacaac	aacaaccaga	aagagaagag	gagaataagg	44160
atgcagatag	tgacagcgac	agtgatagca	gcagcagcag	tagtagcagc	agtagcagca	44220
gtagtagtag	tagcagcagt	agtagcagca	gcagtagtag	cagtgaataa	gaagctgaaa	44280
agaagaaaga	agaggaagta	cctgccaaaga	ttcagaagag	aaagaggcta	agtgaagggc	44340
catcagaagc	tgcttcctct	cccaagagaa	tgagagtga	agaagaacaa	caacaacaac	44400
tatcaccatc	attggacata	ctccagactg	cagttgatga	gatgatggaa	gaaattcctg	44460
cgcttgagcc	tatcgttgct	acaacctcac	ccaaggcagc	gacacttgca	ctcaagacag	44520
gatttagtta	ctcttcattc	gtaagaggag	atgacctttc	agtagctggt	aatacttccc	44580
ctactgaacc	agcagctgtg	cccgtgctg	ccacttgcac	ttccgatggt	ggaaatgact	44640
ttttggacat	gttggacggt	ttacctggcg	atatagtaat	gcaacctggc	gaatgcgacg	44700
tgaccgcaaa	attctttgag	ggcatcaccc	taccagatgg	tactgataat	gaatgcacag	44760
gtttcgatga	tcttcttaaa	gccaccgaga	ctgataacat	tataaccacc	acatgcttta	44820
cctccccgat	tcacccttct	agcaactcag	ccccagaaa	ggatattgat	aattgcagtt	44880
ctattaagag	gtctagggca	ggttcacttt	ttgacactga	tgatgatagt	gaaacaaatg	44940
aggttgaaaa	ggaagccctt	aaacgtaaga	agcacttgaa	aaagaggcgt	aacaagtccc	45000
accgtggttc	ctctggttct	gcttcttctt	ctcattgtat	gagtagtgat	gaagaatcag	45060
aggatgaaag	ggatatgaaa	tcaacatcaa	aggttcacaa	gtcaccaaaa	gctcatgtta	45120
aacattcccc	taaataatgat	ctgtgaaata	gtgatgtaaa	taactcatac	aacaatgtta	45180
atagtacaac	atgcattgtc	tcattcagata	gtgatgcaga	agcacagcct	aaaagccata	45240
ataaaaagcca	ctctcgtaaa	cactcttctt	cctccacaag	tgataagaaa	cagaaccaac	45300
aatgctcaat	caatactcaa	aatgtcaaga	agactgttgt	acagtctcca	cctagtttta	45360
gaagtttttag	tcctaagaaa	gatgagcttg	gtgatttctt	gtcacgcaag	cacacaaagc	45420
cagtttagcc	ctataacaag	aagcgtgata	atgttaacac	cactaataat	gtagtacaga	45480
ggctctgcctg	accgactcaa	atgatactca	atcaatgtac	aataataatc	ttagtactta	45540
acaagaagaa	ctatatTTTT	ataatatTTT	tacatgtctt	aataacaaac	aaaataaaaag	45600
aaaaccaatg	tattatatgt	ttaaaatcaa	ccccatttgc	atgattaaac	taactatagt	45660
gtgtaaggaa	agaaaaaaaa	catgattatt	tctgccatta	aaacaacaac	aaaaattcta	45720
agcttctcct	ttctttctgt	gtctttgcag	attcgggagt	ctttctaaaa	ccacagcaat	45780
acaaaaaaca	acacaaattc	tctactgctc	tccctcacca	atccccctat	cgcccttatg	45840

ctccttctcc	tctctatact	tcttccccat	tcacttctga	ctatcaattt	tctgattcat	45900
ttcaacaaca	atgccacca	tacaattact	accccacacc	ccctccatct	atgtcctcga	45960
cgacctctcc	atcgctcttg	tgggatgatg	acgatgatga	tgacgaagaa	gacgaaaaag	46020
atgtcaagca	agaagtctcg	aaccgtcccc	ccattttttc	gtacatggaa	actgtatctt	46080
ttagtataaa	cgatgaggac	gataacaagg	gagaagaaga	atgttttgga	tcaaactttg	46140
atatgttttg	tgattcagat	aacatgccat	caacttctac	tgcccccttc	cctcctccct	46200
ctacaacaac	accacttctc	actcctcgat	ccatcatgga	tactgattcg	gatgaatgtg	46260
acgaagaagg	agcagcagca	gcatcagcac	cgtctattgc	cgcctcttct	tctatccctg	46320
tcgggatctc	tgaagctgaa	ttgaaaaaaa	tggaaaagaa	aaagaggaa	gaaattaaga	46380
aactcaaaaa	gatgatgaaa	gatcctctcc	ctcacctata	tgtaggagga	gaacctcctg	46440
tcgcagcaga	ttataaaaaca	agggcaaaca	tttcccttta	taaagttgac	cctagtatcg	46500
atatgtgcgg	tgtcgccccct	cctcaatttt	gcgctgaatt	gccaccccca	tccatagatg	46560
tgtatacttc	ttcctatgta	tttccctctc	ccacacctgc	catgcataat	aagaaagggt	46620
ccaagaaatg	tcaattcctt	aaggggagaa	aggctttgag	gaaatggatt	cacgagaatg	46680
tatgcatggc	ccctcccggg	aaaaggggag	gtgtattttt	ggctcacttg	gaacaaagat	46740
tcttggtcga	acatggagat	gaatacaagg	tccaaggat	gtttgtttca	agagtattga	46800
acaaagcttt	ccccaatctg	attgctcgtg	cagacacact	gtgcagtgat	atgacattct	46860
atactaacct	ttgttgata	gttaatggag	ttgtcgtatg	ctttgataaa	gatgatggag	46920
gaatacatgg	cgatgcgtca	gagtatgcaa	caggagaaaa	ttttgatact	gtagtgttcc	46980
acaagaggga	agaacaaaag	accaatggga	gtgccagtaa	gaagaggcgt	ctcagcctg	47040
acactagtaa	tatgggaaca	agcactgatg	tgcaagaatt	ccaaacgatg	ggaacaaata	47100
ctgatatgca	agaattccaa	tcaatgggaa	caaataccaa	ccccatagag	acttcatcag	47160
tgggtgtgaa	taccaaccca	cttcccaacc	ctcccccaag	attggttaatt	actcctttta	47220
cgaatgatgt	accagaattg	gacatgatgt	ggctttattc	gccttccaga	ggagggtggaa	47280
attctagaat	gagtgcgaat	acaggaacat	ctccccctgc	taacacccca	attcctacct	47340
gcttcacagg	aggtgcgaat	gtagtagtgc	ctaattggatt	tgtccctccc	acgttcccct	47400
tagaatgtga	cgaagatgat	ccaagtattc	ccaattctta	caattacgaa	gaggataaag	47460
tctttcatcc	attttatgag	tatatggcca	aatatctatc	ccctcttggt	ccatcatata	47520
acaagggaca	gacttgtaat	gttgtccagg	agtgggtcaa	gggatccctc	tctcttgcaa	47580
agcgtagagg	aacagtcccc	aaattctgta	gtaacatttc	ccacgctttc	ttttgtaata	47640
tggatgtatg	tactgccatg	tgcaaatggg	cgaagactgt	aattagacat	ggacaatatt	47700
gtaatatagtg	tatcgtaagg	aggctcatga	cataactgct	cgcatatcac	tacattgttt	47760
gcagagacgc	ttcatgtgat	gttcccaagt	gcagggaag	ggttcgcaac	gacatggatg	47820
actgattgat	tgggtgatat	gtgacatttt	ctgtatatgt	tgtaaataag	ataccaataa	47880
actaatgttt	tatatatgat	tctatttttt	taaaaacctt	taaaaatata	catataaaat	47940
gatgtatttt	tgaactaca	ctctggcaga	atcagaccag	acccctgacc	taaagcagac	48000
cacaggggag	tcttagagag	gggtgtgaat	ctggctaggg	gttcatccct	caatgttaat	48060
cacacgcaag	taaaaacacc	acttccctaga	aagggaaggga	aggggtgact	tgggtgatatc	48120
ataactgggg	aatttccctct	ccagatatct	ggctgtacac	gtgtgagcgc	ttctggggcg	48180
gacaagaaaa	aaattagtga	tatcataact	ggggaatttc	ctctccagat	atctggctgt	48240
acacgtgtga	gcgcttctgg	gcgcgacaag	aaaaaaatta	gtgatatcat	aactggggaa	48300
tttccctctcc	agatatctgg	gtaagaaaaa	aaattagtga	tatcataact	ggggaatttc	48360
ctctccagat	atctgggtaa	gaaaaaaaat	tagtgatata	ataactgggg	aatttccctct	48420
ccagatatct	ggctgtacac	atgtgagtgt	tctaacttca	ttttttatat	agaaaaata	48480
actgaattag	ctctctaaac	ttttccctcat	ttcttactcc	tctttgtttg	tatgtcctac	48540
taccagtgtg	catataagaa	ctggagagat	gggagtttta	aataacaacc	cttcttaatc	48600
cctttcatgt	ttatatattaa	taaatataat	caccatggat	atttcaaata	agacattatt	48660
tttagtagtc	ggtacctttt	ttctgaccac	ttgtgcattc	tgcagtccaa	ctcaaatcgt	48720
ctggaacctc	atggtagctt	catttgttgg	atttctagga	cataaactac	ttaaaaacat	48780
tacacctgtc	aatctggatc	ttgtcggaaa	aagcttctga	ttctctgcaa	gtttaacctat	48840
ctcagaagaa	gcccgtttat	tgaggatttg	aaacgtatta	agggactata	atggcaacaa	48900
ttttgaagag	tatgaagaag	aagaagatag	tggatttgaa	gaataataat	aataataatg	48960
gtttgaataa	aatatagaga	tacattttata	ttgttttatt	tgcattatat	ataaaaaagc	49020
actacaaaat	ttgtacacat	acattgagag	aaaaaattga	tacaatttct	tccttttttt	49080
tactggatc	tgatttcttg	atattcgaga	gagtttagtag	tagcagaaga	agtagcacca	49140
actccggcag	cagaagttgt	agggataggg	gcggtggcac	cgggtggcag	ggcagcggca	49200
gcagcttcac	ggcggtgttg	ttgttccagg	ataatctttg	cgcgtttatt	catttccagt	49260
gtgcgtgtaa	agatgcctct	gttgtatttg	accaccttat	tcctatatct	tccgatgtcc	49320
ttatcgcgct	tctcaaaaaa	cttggccatt	tctccacaac	gttgacgggc	tgcccatgca	49380
gtcatagcca	taaaatcaaa	ttggtcagag	gtgatattat	ggttggttag	aaggccaca	49440
gcgtaggcca	tacagctagc	ggcacgttga	atattggagt	acttgctgtt	tcttggttta	49500

acgggatgga	tcaccttact	tccatcattc	aagaattctg	cctcttctct	gtgcagaaga	49560
gatgtgcctc	tgctaactgt	cccgtcgtcg	aggacaaaag	caggtccagg	tatgggtgtt	49620
tcgcaatctc	cgtaagaagt	gtcagcaacc	gtgaagtggg	aaggatatag	tccattatct	49680
ccaactccag	aagtgagtgc	agcgctataa	acttctccgg	tgatttggcg	agtgactgga	49740
ttacttagcc	ctgcgtcaat	ttcagacata	tttcttctct	cgggtgtggg	aaggaagggc	49800
ctaggtgggg	cgagagtgtc	gttgtttctt	tcagccgtag	tagtagcaag	agatgtgacc	49860
caagaatatt	tcttgttctt	agactgtctt	ccagaaccgt	cgtcgataac	aagagatggg	49920
tcgtcctcgt	cactgctacg	gttgccattc	tggttcttct	tcctctttga	atccttcttc	49980
ttagacttgg	acttgttctt	ggggccagga	acaggtataa	catccacatt	gggtgtagaa	50040
gacatcctcg	ttccagtaga	ttcagtcaga	gatgtaagt	ctggcacggg	aggcatggcc	50100
gtaacagaga	taccttgtgg	tactcggaac	attgcagaag	aagacgtaga	attagagttg	50160
atacttgtaa	cagcagaagc	agaagtccga	gaggcgatgg	cagcagctct	ggcggcagca	50220
atcatagggg	ctgtagtggg	gcaaatacggc	agagtgttgg	atgaagtcgt	ggcagcagag	50280
gtagagttga	tgtgagacat	cttgatttct	tgggtgggtg	gttgggtgtg	gactattgtg	50340
ttctcagaga	ggacttgtag	tcgactgtgc	tctaccagga	tccacagccc	ctttcatatc	50400
cgattttcgg	gggttgccag	atactaata	actcctccac	gccctcttct	tgcgccatat	50460
ctataagggg	cgaaaagtgt	ataccttgag	ttgatccggg	tataaccgcc	attgttgggt	50520
ctttctgaga	atcgagagtt	gcgatcacgg	catggcctcg	tgggggaatt	ttcattgacg	50580
taagcagtaa	cgtcagaaga	attgttggag	cggggttggg	taaagtgcct	ctggtgttgg	50640
tggcgggtgt	gggtgtggcg	gtggtgttga	gcagcagcag	gggcgtcgta	gtgttcgtat	50700
tgctcacaat	aatagtcctt	gggcacttgc	attcttcttg	gatgaatata	tctttctctt	50760
tcttcgtatc	tgggttcgtc	ctctcttttt	atgtgttcag	tttttatgtg	agttactctg	50820
tccatctcca	ttttctcaga	atttcttccc	cctccattga	cgatcatccga	ataactcaac	50880
tggcgccggg	gatactgatg	acgtcttatt	cttcggacct	tattatcccc	tccttctgaa	50940
tcacagatg	atccagagtc	agatgaatca	gacgaatcgg	atgagtcaga	ggaagaagaa	51000
gaagaatcgg	atgagtcaga	agagtcctatg	gagccactcc	caattccact	actaaattca	51060
gcttccaatt	ctctgacgac	atctatatatt	ttagtatctt	tttcttccac	atcttgattc	51120
gtattagggg	atgtcacacc	agtttcgttg	ctttgttctg	cgaggatatt	ttcgaaacct	51180
tcaagaaaag	gaatgtcaat	aaaaccttcc	atttctacga	tctccccttc	ttccaattct	51240
tcctttttgt	tctcttcttg	ttggtttctt	gagacgggtg	tttcagtaaa	atttgggtta	51300
tctgtagatc	caaatccacc	agttccacgc	acgttctctg	cttgattttt	gttgtccttt	51360
ttagaaactag	agtcaataat	cgttctctct	cccgtgtgtt	cattaatata	cacaattctg	51420
tcttctctga	catcacataa	tcttaagaaa	atcaactggg	caatgctggg	tccctttctg	51480
attggcacac	ttttttctgc	actatgggtg	cgcagaatca	ctttcaattc	tcccctataa	51540
tccacatcaa	tcgttccagt	aggtaacta	gtgtgttctt	tccatgtcat	cccagaacgt	51600
gacacaattt	gtccataaca	gocgtcggga	aacttgtcta	ttccatatcc	agtagagatc	51660
ttggccagtc	ccataggttc	gatatccatt	tcttcagagg	gaaatagggtc	gtaggcgaca	51720
gaaccgggcg	tggcacgtct	gggcggaagt	gcagtttctt	ccccgggagg	ggcgaattct	51780
ataaacacga	cagatgcaga	tgagtccatg	gctggataca	gggagtagac	agtgaggacg	51840
ggatgtaata	agtgttcaac	gtctggagga	caagtgaagta	ccttcctcgg	ttcctccacc	51900
ccttttataa	tcgtgaaacc	cccacacccc	cgctaaggca	gtaaaaaaa	ttgacccacc	51960
atcaccctct	gtccttgaag	gaggaaaacta	gaagataact	tttatcatgg	caacattttac	52020
tgaacaggat	cataaaaaatg	cgtttttata	tgctaattgag	aagctgaggc	aggaaagaat	52080
atacagactt	aaaaatgtctg	agccttcagt	ttatgctttt	attgacataa	aagaaataga	52140
aaatggttgg	gaaaaagaat	tcgggctttt	agtacaacca	ggacagaaat	tagtctcttt	52200
cagggatatt	tcttatgact	caagcaaact	tgattgtgac	gcattttctt	gcataccttc	52260
agatatactt	cattctgata	atgaaaaaag	agtaggagag	tgcaactttg	ccgaacacac	52320
ctctgtctca	tttctgttca	agaaccctga	gggaaaaaca	ttgcgccatt	tcacggcatg	52380
tggtccaggg	tgttaccgga	ggtacaagca	aagagacccc	catactgggt	tgccagtagc	52440
cagaggcgctg	ctgatgcaag	atcacgttga	ccatgaaact	ggaaataaaa	tgtgtgaata	52500
tctgaaccag	agcttagtca	tgtgggctgc	tgtcccttgg	atacgacctg	gagaccttac	52560
tgaaggttac	aacacaacac	acgtgccttg	ctttgcattc	aaggaggatg	acgaaaggga	52620
ttcaaaaaga	gttaaatatg	aaaatgtggg	catttcaaag	gcttattgtg	atttctttta	52680
acagtattat	gacgcagact	ctggctcatg	ttatcgatct	ggatggatga	aatttgtcca	52740
tttaatgttt	gggcagtatt	ttactaatct	ttcttacaat	ttagctaacc	caaaacctta	52800
caatttaact	ggaaatacat	ggtctgatgt	agtttctgta	ttgacagata	accctattgt	52860
agatgcgggt	gctgctccgt	ccagatctga	aatggatgaa	attatcacca	agaagaagtt	52920
caacgtattc	ccttctgagc	agacatctgc	tcgccagaaa	gcagagaata	taatacgttc	52980
tcagtacgga	gatggtgtag	aaatagaccc	atcttctgtg	gatgctttaa	tgcagtttgt	53040
taatagggaa	gggtgtagtag	gaacagagaa	aaaatccgac	cgcctcatgc	gagtggcaga	53100
cgctgttatg	gatgcggcta	tgcgccttca	agtcatgggt	ctggacgaca	gtcaatctag	53160

acgattattg	ttaaaaaata	tgattaaaaat	gagtagaaaac	aaccacagaat	atgcaagaca	53220
tttttccagt	tctctcaa	taattggagt	aactttggcc	ataaaaagat	ctgttttctc	53280
taaaggcgct	tcagctaaaa	gaaaggaaaac	ggccattaat	aatggcgaac	agcatagaag	53340
aagcagatgg	tcacccgaga	cggtgacaga	agaagatgca	cttttatttg	caagagaaaa	53400
tatcactgaa	gacccaaaac	accctgcgcc	ctttgtggac	attttacact	caccagatat	53460
caattcatct	atcaagagcg	gttcttcttc	ctcaatatgg	aacgatatac	tttcaagaat	53520
ttcttcgacc	agaaaactgg	aagaaaaggc	gagtgttttc	gttaaaaatc	ttgtggtgaa	53580
agtagtgaga	cagttcttgg	acatttttaga	aggtaaactg	ttttcggacg	gatacgaatg	53640
ggacgataat	attcctctga	tgataggcgt	ggaccaaata	ttgagagaag	tcattaaggc	53700
ggccagtaat	atgtgcgcta	gatttgccctc	ctcagctctg	gagtctagtt	tggttactgg	53760
ctttatagac	tcggcgagtg	ctatcacttc	taggttagcc	gtacaactgg	cagccagaac	53820
gttctccgta	ttcttggagg	agtctgttat	agaatttgta	gttgccgcaa	gccttcggct	53880
agcgatacag	gcatttgccg	atctggcaac	tcttgccgcg	tcagccttaa	ccgttatttg	53940
aattgtttata	ttcgtaatat	aagtacttgg	gttgattttg	gatcttgccg	tagggtagg	54000
ttggtacgat	cacattttta	gcccagagga	tttaaagaag	caggttctag	tggttaggag	54060
agagtttgca	aaggcaggaa	atgtagatgt	gggtgtagct	caaccagtca	cccctgaaga	54120
aatcgctcgt	atcaacgttt	tccttcaaac	tgaagaaaac	ggggaagaaa	agaaggaaga	54180
aggagcacga	aatcaaaga	ttgattttct	tcaaaaatac	ttccattcta	ctcctttgat	54240
gggaaagaaa	agtaagtttg	tctacataca	agaagcagct	caagaatact	tgggaggaag	54300
aacaatgaac	gcatttgggc	agcgataaat	aacagctgct	gatgatagtg	acaccaccac	54360
caccacacaa	gaggggaagga	gggatgacga	aacagtgact	aagaaaatga	ggagtattat	54420
tctagaaaca	ggtcaaactc	ttaaggatta	ctcgtctgct	gttaactata	acgcctcccg	54480
tctagattac	gtgggagagg	aatgggtaag	aaatactgcc	ctaaaagaag	agacaaggag	54540
caacactact	agtataaacc	tattcaagaa	aactgtttct	cttgctagta	tggccggcgc	54600
atctctgggt	ctaggaatag	gtgtattggg	agcgtcccat	attacacttt	tacgtttcac	54660
caatattggg	ctagcttttg	cgttcgcagg	tctcctagca	tttattgcac	ttatgagtat	54720
atcatatata	aacatgaatg	ctatgggtgt	agtgaattcg	gacgcaatat	acaggtctac	54780
tgctctagtt	ggagatatca	aaacagaccc	cagaagagta	ggaatggtcc	agcgccacgt	54840
aggtgtcggg	gctaaatata	acatgattac	agatttcgtc	tctccaatgt	tagacgagat	54900
cgagagtgc	taaaaagtga	gggttataac	ccccccccc	acaaaggctt	taaattagac	54960
tcaaaccaaa	ttcataatca	ttgtgaagac	atcgacgggc	gaggaaggtc	cgtgctcaaa	55020
aggtcccaaa	aatattcctc	aatacaaaaa	taccattggat	tcgttgacta	atacagtaac	55080
actcctcgtg	aatgaccgtc	ttggaaatca	tgaacaaaac	aaaccaatca	ccgaacaaga	55140
tgtggaaaat	actcttaacc	ttaacagctc	agaaagggca	agtcttttga	agttatattc	55200
tgttttcatc	aaagaaatgc	agtcctattc	tggtgtgata	cccaagaaca	agtacacgaa	55260
tgtgcaagaa	atattcgaag	atggactaat	tactttcgaa	tggagagatg	gaacaaaagt	55320
acacagacga	gtttcaccaa	gttccccctat	acctctttct	acaaaaaat	cgcctcggtc	55380
ctcaccttcc	cctcctccat	cgatgccttc	tattaaagaa	gaagaatttg	aagaagaatt	55440
tgaagatgat	gaagaaatat	acgaaacaga	tgaaaatgtg	gaagatttca	taaatgggtga	55500
tggagaagat	tcagaagagg	aagaagaaga	agatataatt	gttgatgacg	aagaagaaga	55560
gaatgaagag	ggagaaaaca	agtacgttct	cgcattctct	aatcatctga	ggcgccagac	55620
tgccgcccgt	gccgcccggc	ccgcagctgc	tgctgctgct	gacattgaga	agaaggacaa	55680
aaaccacgca	gttagtgccg	atgactacac	actgtccgcc	ctccagcaac	agcaacaaaa	55740
actgctccag	caacagcaac	agcaacaaca	ccagcagcgc	tcctcatctg	agaaggtcac	55800
ctccacaccc	aacaaattca	acaagttttt	actgccgagt	aatggcttct	cagaacagac	55860
cgagctcttt	gtttgtttcg	atgtggataa	aattgcgcaa	tataatggac	tcgtggagct	55920
agacatctta	cccattgttg	ctgaatacat	tatcaacggc	cttggctctga	aatgcagtat	55980
ggaaactccc	ccagtgaaac	cgtgcaggag	aaaggaagtg	aaagatgtgt	ggtgtcagcc	56040
taaaactagc	tttgaaaatg	atgctgtgga	agataaacat	ctcgcattcg	cagaatcgcc	56100
tataacttcaa	aggcctagag	atctccctat	ccctaaaaaa	atcaccgcct	attttggttt	56160
agacgattct	gtagacatta	aaaacccctg	gggttcgtgt	ccgcttttga	aaagtggatc	56220
aaactttcga	gtgtccgaat	attcgcgtca	ttttaatgaa	ttctcaggag	ttaaaaatga	56280
cgatgacacg	tcttcaaaca	cttgctttat	atactctcaa	aaaaacccca	acattgaaat	56340
tgtatcaaaa	ttaaatattg	aatttgaggt	aatgatggag	ggaattataa	cccatagaaa	56400
agattttgtc	gagacgggca	ttttgagcga	ttcttcatta	gctacggcta	tggcattttg	56460
ccacccaaaa	gctagagttc	gaaatgttgc	attgttttat	ttttctgtat	atttaccatt	56520
ctctaaaata	actcgcaaa	aaactataaa	atgttcagag	acggataagg	tacatattgg	56580
ttcagacgcg	atcttttctc	ccccaaagtga	taatccta	ataagtgtc	accagaacaa	56640
taacaacaat	aataacaata	ataccagtg	gaatatcgag	gacagaccta	tccgaaataa	56700
taatataagc	agaaaaatga	ccatcacaaa	ctaccaatgt	atggcatgca	aggaaagatg	56760
cacaaacaat	tgactaacg	gtaactatcc	cgatcgtggt	aaccagcact	tgtcacatag	56820

tgtaaaagg	gaagatttct	ttaagatttt	aaataatagt	aaagtagatt	cattgaaaa	56880
attgagcaga	gtactgattc	ccgctcctcc	ctctggaaat	tatacatcta	agttttgtga	56940
tagaagctct	atgtgccata	gcttcttttg	tagagggatc	gaaccagtgt	ctacttcttt	57000
ctcatcggac	agttttgaaa	agactaaact	tgttttgtat	ggtaaagtcg	ttgacgttat	57060
caatagttat	tctgccataa	aaacttccca	taataataga	atcaggggtct	tttttaactc	57120
tgaggaaaaa	gataataaga	ctatccccct	tagagccgaa	agtgcaaaaa	atgcattcaa	57180
ggatatactt	gttcacgaat	gtaataaaga	acgagctggt	tcataatttg	agcaaaaaca	57240
attatcctct	aaagatgggc	atctatctaa	caagtgggtg	atcgaactta	atgacttgaa	57300
cattatgttt	gagaaacacg	tggaagattt	ttacaagaaa	tgttctaaag	ttaatgatgc	57360
agaatcttta	aaggatattt	ttaatgattt	tgaaaaaact	tgtgataaat	acaaaactgc	57420
caagagggca	attattggag	cacaagaccc	ttctacttct	actccctcta	aaaaggagaa	57480
tggtatcact	aggattatta	gtacattatc	cgaatttcat	tcaaaagatg	aagctacagt	57540
aagtgcctct	ctcgacaaaa	caatgctctt	gggatcgagg	acaataatgt	ctggtgttag	57600
atgtgttata	cgtaacaata	gtgtgttttc	gggctttgaa	aataagaaca	ctaataataa	57660
ttgggaactt	gagattagac	actatgtcat	ctctatggga	ggtgctgcag	tgacaaagat	57720
ttccgatgaa	gatttggaac	aattcacgcc	tgtaagaggt	gctgtctctg	tcactacagc	57780
acctaataat	aagctacctg	taggggcaca	tcagacatgg	aaggatgaac	aaacactaaa	57840
aacaaacact	aaacgtaata	gtctatatga	ctcttacaat	tcaaaaagga	ataataggga	57900
taataataaa	caaaaaaatc	gttcattaaa	actatcagat	tttaattgga	gaacacccaa	57960
tatctctatt	ataagaattt	atgcaaataa	agatgatgtt	aacaagaaga	ggtacgcaga	58020
agtcgtggcg	tcagctgctc	caaagtcacc	ttcaccaacg	agcagcagca	gcagcaacag	58080
caacagcagc	agccctcctc	tttcaccgct	ctcaccaaca	gtgaagaata	gtaataataa	58140
accattgtat	attcctcccc	ataaaagaat	gaccactact	gctgtttgac	caatttatgg	58200
gttattttat	aatgttgtgt	gatattttat	acaataaaaa	tatataagaa	aacaaccaa	58260
tgattttgta	tatccttgtt	ctgtgttggg	cggaaattcc	tccgcgccca	ttatgatgaa	58320
aaaattgcta	gaggccttga	atcctgggtc	cgacaagggt	aacaacaaaa	aaaattacct	58380
gtatgtgcaa	gtcatatcct	ccagtcacc	gcatgagaac	ctgttattgc	accacgattc	58440
gtgtaacaaa	gtcgtatctg	cacatgtgca	taaattcctt	cacgctaaaa	tgaacgacaa	58500
aattgccggg	agcaatgggc	gtgagagccg	gttcctggaa	aaccccacct	ccgttccacg	58560
cactacctca	ctattgcacc	attttttggt	gtataaaaa	gcacggagag	gtagctaaaa	58620
catccactcg	cagagacatc	accgtcaaga	tgacgtctcc	tactagtgtc	ctccgcgttg	58680
ctactactgc	cctgctgttt	gctgtgttgg	ttacgctac	tgtgatttct	gaagctgggg	58740
gaactaagat	agacgaccgc	tgcccttcc	cgccatgtga	ctacttcccg	gaacctgaat	58800
gacgtggaag	aagatgtgtt	agagctgctc	gaagggggaa	caacaacaat	aacaacggaa	58860
cccgtgatgg	agc aaaagtc	tttggcgaaa	tcgcaaatgg	actgattggg	cgtaagaggc	58920
gtgaagcagt	atctctaaca	ccagtcctatg	aagatatgcc	agatttcttc	ccctaccctc	58980
acccttgatg	tcccatggga	gggcgtctac	cacgtgaagc	agctcctcca	cttaaagggtg	59040
cacttggacg	taaaaggcgt	gaagcagctc	ctccacttaa	aggtgcgctt	ggacgttaaga	59100
ggcgcgaaag	agaatccttg	gaggaagaac	ttgtgtctgc	tgaagaagaa	cgtgaaaagc	59160
gcgaagcagc	tccccactt	aaaggtgcac	ttggacgtga	aaagcgcgaa	gcagctcccc	59220
cacttaaagg	tgcaacttgg	cgtaagaggc	gcgaagcagc	tccccactt	aaaggtgcgc	59280
ttggacgtga	aaagcgcgaa	gcagctcccc	cacttaaagg	tgcaacttgg	cgtaagaggc	59340
gcgaagcagc	tccccactt	aaaggtgcgc	ttggacgtaa	gaggcgcgaa	gcagaactct	59400
tggaaggaag	acttgtgtct	gctgaagaag	aacgtgaaaa	gcgcgaagca	gctccccac	59460
ttaaagggtgc	acttggacgt	aaaaggcgtg	aagcagctcc	tccacttaaa	ggtgcgcttg	59520
gacgtaagag	gcgcgaagca	gctccccac	ttaaagggtgc	acttggacgt	aagaggcgcg	59580
aagcagaatc	cttggaggaa	gaacttgtgt	ctgttgaaag	agaacgtgaa	aagcgcgaag	59640
cagctcccc	acttaaagg	gctcttggac	gtaagaggcg	cgaagcagct	ccccactta	59700
aaggtgctct	tggacgttaag	aggcgcgaag	cagctcccc	acttaaagg	gctcttggac	59760
gtaagaggcg	cgaaagcaga	tccttggagg	aagaacttgt	gtctgctgaa	gaagaacgtg	59820
aaaagcgcga	agcagctccc	ccacttaaa	gtgctcttgg	acgtaagagg	gcggaagcag	59880
ctccccact	t aaagggtgca	cttggacgtg	agaggcgcga	agcagcagca	gcagctatgc	59940
ctccccctga	agacgatctc	gacttctttt	acgcacctgt	tgtttgcct	ctacatggag	60000
tatggaaaagc	accagaacct	acaggttaaa	atgtggctga	acatcacata	tacaagttaa	60060
ttggataatt	gaaacaattt	gacttttttg	tacttaattg	ttattaattg	aaacaatttg	60120
actctttcct	acctaagggt	tattaatttg	tacattgtta	acacttgctc	tttgctcata	60180
gcagacatac	ctgctatttt	taacgctttg	tttaacgtgc	tttttacaat	tgatattggg	60240
acatgtttgt	gacctcttga	ataaattttg	ttagcatcaa	tatttatttt	atttttatcc	60300
ttttcttgtg	tggtagaatt	agaaggagat	gtggagggtg	ttgatgtagt	agatgctgtg	60360
cagagttgct	cctggtgttg	ctcctcttct	tgattcacat	tgtcctcttc	aacatactcc	60420
tctaatecaa	agcgtctctg	aattttctct	tttacaccct	caccacaatc	tcctatcgaa	60480

gactgtgcta	atataatfff	tgtagtagaa	gtagagaata	atggtacaac	gttattgatg	60540
ttgttacttc	tgcccatagc	tggtagtatt	tttgaaggca	tgccctaaaa	aagggatata	60600
tctttgtcct	tttctataca	aaaggataat	cgttcatccc	catgaaaaag	tgtagatgg	60660
ggcaatgtac	acctatagaa	cagtgttatt	tcttctatat	cttccagtat	ttataccaga	60720
ccctcttgcc	ccatagtttc	gtatctccat	tttactattc	ctgtctctct	ggtgaaccca	60780
ttctgagcca	ggtgttctgc	ccataatfff	tgatgtttta	tcaacaacaa	tatcagctga	60840
aggggcaaaa	ggccccccat	cttccagtgc	actattccca	ttagaaggaa	gtggactagc	60900
tgccataggt	gacaataatg	aaggggagtg	tgaaaacaca	ggataatcat	ccacaccctc	60960
tgctactaga	gattctagat	ccgggggagg	aggtgtaggc	aacataatff	ccatctgcat	61020
ttcttccccc	gacgtggacg	gttgctgttg	ttctactcct	tctacctcta	cttctactct	61080
tcctccttct	ttattatfff	ctgcttctag	ttccttcatt	accatttcca	cgctgttgcc	61140
tagtctcatt	ttcttattgt	tattttttat	gcgttcttta	gcttgctttg	ttacttcata	61200
tgtaatatca	gatgagtagt	atttgcctgg	acaaataagg	ttatcactca	tggtgtgata	61260
attagtatca	gaattgccat	gtgcattatc	ttttgttata	aactcctttg	gtgggtttatt	61320
tgccaccagcc	gtgaaagtat	ttgccagaag	agccgaggct	gatgaagagt	tttgcttaac	61380
atacttttca	tcgatagttt	tattaaataa	tgtaactaaa	ctggccgaac	acttactatc	61440
ccggcaatfc	gcacatgcat	tattattcct	ctttttatta	tccattgagg	cctcctttgc	61500
agtttcaatt	aaagctgata	tttgccccat	gattttaagg	ctcgcacaca	gtgccatttc	61560
ctgtcctcct	ttctctagtt	gaattgatcc	ccattcatta	aatttttctt	gtagagtcag	61620
gagactactc	ttgagaaaag	agtgtaaaag	tgtttgagta	gttatacaat	ttttcaacgt	61680
ttcagtgatt	gggtcgaacc	cgaatttgat	ctgatttctt	acactatcca	gtaaatcctt	61740
gtttaattct	tccgtgtcag	aggaagggaa	agaaattata	tcattagctg	gaattgattc	61800
agaaaagtga	atatttttaa	gtacatttcc	gtctgttgaa	gaagggtgct	ttagatcaca	61860
cgtgctaagc	attacatcta	atgataagaa	aggggtaact	ctttctcctg	tatcgagatt	61920
tcctacaaca	ttttctgggt	tcaagagatc	gtctgtttct	gtcactccca	ccaatctctt	61980
gtaatcttcc	tcagcaacag	tttggttggt	gttatagaaa	gacccataag	tctgaaaaat	62040
tctcctcgca	gtctcattat	ctgcatcatt	agctcctcct	cctcctcctc	ctcctgccac	62100
atttaaaaga	tctaggtagc	tactcatctg	ggagggaagg	ggagggttaa	gggttgata	62160
taaagaggct	tgtctgaaga	cgcgagtgat	cacaacttca	acgatggacg	tcgagttcgg	62220
tttcttccac	ggtctgctct	ccaaggccct	tctcccagat	gaaaaacatc	aacccgttat	62280
aaggcgtctt	tgtgcgggat	attctagaaa	taaggagag	gatggctgct	gctcgttctg	62340
tggaagaaga	ggaacaggag	agagcaatac	tgctgcctt	gaacaactaa	tagaggattg	62400
ttcctttata	ggaactgtct	catctattgg	tacaattatc	aattctaata	tttcaaccag	62460
ttgttctaga	ctacaaaaaa	cgtcagacag	ttatgcggca	ttatcccat	ctagttttct	62520
ggatgtggta	tatccaagtt	tgaagaaaaa	aactgaagac	gtattgcctc	attctttacg	62580
tgccattttg	aataaacaac	ttccaaagtt	gtatgaaaaa	actcttcaac	ccatagaaga	62640
agaggatata	ggttataagg	attatgtttg	ttcaattgaa	gacgacgaca	atgttgatga	62700
tggtgaccaa	caagaacaaa	tgattattga	tgaagaatct	tataaaaacta	ttggagaaaa	62760
atcaaccatt	gaactgatag	gcatgtataa	caataacaag	tttggtaatg	aattttataag	62820
gattccttta	agagaaactg	cgttgcacgc	acaatctctg	aggtacgaca	ctgaagctaa	62880
atttgttaac	cacaaggact	ctatacctct	attttatgaa	aacagcacgt	gcacatgtaa	62940
ggaacgtctt	attgattttt	ctgagagaca	actacaacaa	ctaaaacaag	atggaatgga	63000
taaaccaacg	gacaagtaga	gaggatcttt	tcaacacgta	tacagggaat	gcagtaatac	63060
gttcggcagc	taagcaagca	ctggctattg	aaaaacacgc	agcagaaaag	agaggagaaa	63120
aggcatggac	gacttcagca	gcagcagcag	cttcttctaa	ttttaataat	gtacaacaag	63180
attatactga	tgatgatatt	acacaagtgt	ctattgcaaa	cagtgttttg	aataaccctt	63240
ttttaaagag	atatgcaaaa	cttatagata	atthagcaat	atcttcttta	cctcctgata	63300
tagaggatga	tgtcattata	cacactagag	atgcctccaa	ctctacagtc	agagtagatg	63360
gagccaatat	ctatttcgcc	ataattgacg	gtgatttatg	tgtataccct	aaacaatata	63420
tatctgataa	agtgctgtgt	ggttctctca	acggggaaaa	ggcactgttc	tataatagct	63480
ccaagaataa	gtggacgtat	ggatgtaacc	taaactttga	tatcgttgac	gctgccatca	63540
tgaaacaccc	cgactacaag	gaagagacta	catctacaaa	acatatacgt	aaaatattgg	63600
gtatcggagc	atcggaaaaa	ctgaacatta	ccactatfff	aaactacttt	atccaataaa	63660
tcacatgttc	tatatacagc	ccagaaatgt	cagccatgat	gaatgagaat	gaagaaaaaa	63720
acgttctcag	taataggagg	gctgtaatat	tgatcttttt	cataggtgtt	gtcattttat	63780
cactcttggt	cttaatcaga	ctagatatag	atatcaaata	tgggaatgtg	ggcgagagag	63840
ccactattgt	aaagaagact	agtcccattt	ttaagggaacc	tatccagaca	gccatcaact	63900
ttaacaacaa	aaagatttcc	cacattgaag	atggaggaga	agaaagtgat	gttatagctt	63960
caaggactgt	tagttctctc	cagagagatc	ctcgtgtact	tttaaccagt	tcatttggtt	64020
tgtataatag	gacagattat	atgaaaaaat	aaaagtacca	aataccatat	caattgtttt	64080
atttcatcat	tagttaacat	ctttttaaat	ccacaatcag	agctaaaaca	tagtgacgtt	64140

atacaataca	ataatacat	tctccctcca	atgatacaat	gttgatgttc	tcctcccata	64200
tacttttcaa	tcaaagccga	gtcttggtcc	ttggataatt	tatccatgac	cagcttagaa	64260
tttctccagt	acatgggacg	aaacactaac	ctcatactag	gattcgtatc	attgtgggaa	64320
gggtttatac	aacttcttga	tgtctttaca	tcctcagtag	gcatttcacc	caataaatta	64380
aacacatctc	ttataataga	aacagactca	gaatcatact	ttaaatcttc	tatgcattca	64440
cctcctat	tagatttatt	aaaggggtgca	aagaaagggg	tttcttcctt	cttcttcttt	64500
tggacatcat	ttttacctaa	tacacttaaa	cctatctgtt	ctcttacaaa	ggactgaaaa	64560
ttgatatacta	tataatgtac	atcttcaaat	ttttggatat	tgcgattaac	atttttgtat	64620
gattctggaa	cagggatctt	ctttgcagtc	gtcatcattc	tggaaacacgt	gcaggcaggt	64680
tctgggacaa	cacccatgga	tagggcgata	gcattggcca	gtttcactag	ccacattttt	64740
gtttgtggat	taaaagtctt	cttctttcca	aaacgaagaa	agaagacgct	acatacgtct	64800
cottgtctcg	caccaattac	acgtattgtg	tcccttttgt	ttaatat	gtaggcaaat	64860
tccagtagta	cttcttttcc	ttcaacaaga	ggtattccaa	gttcttcaaa	atccttttct	64920
aaataatcca	cactctcctc	taaagacaag	gaagaggatg	tgcatttggg	cagcaagatt	64980
tctgtggtgc	acataattatt	attcaaacct	tgagaagagg	acatttttct	ctttactgtt	65040
caggacgagg	agaattggga	ggagttagt	tagtttagtga	tacgtcttgc	cgctgctgat	65100
gctggaggta	gaatgaagac	cacagcgtga	ggggcgacca	tggcttagat	atggccacgc	65160
cgagcactgg	catgaattgc	ccctgagagg	gtagccattt	agtgttttca	ctcggtat	65220
ttccctcttt	attgagagtt	gccaaaagtt	tattatagtt	gtctgtgcat	gtcgatacct	65280
tgtctttaa	atcgtccaat	acttttggaa	tcctctccca	gttcttgcgt	tttatttgc	65340
tgattctggg	agtctttttt	agttcaggca	tatactgcaa	cattgtgtat	tctagtgcag	65400
cagacataaa	attagttcta	tctgtgcata	ttttatcctc	ttctgtttta	ccacaaaatt	65460
cactatgtat	tatgggcatt	aattgctggt	acacaatagt	attatcctct	agaccgcaca	65520
tgttcatata	cacgataact	aaaagggttca	tggtttttac	actataagga	acaccagaga	65580
atctttcatc	gtcgatgcct	tgaactggtt	catagagcac	cacgttacta	ttgttcccgt	65640
cttctctctt	attggcgctc	attaaaactc	cacttagacg	tgataataaa	ctattgtcat	65700
tgtacgttat	attgtcaaga	gaaatgcatt	tgtcgaattc	gttaacaatt	tctgcccact	65760
tttcttcatc	catcacgggt	tgtttattgt	taagttttga	tgatacagaa	catcttgaat	65820
gttcatcctc	ttctatatta	tttttagcga	gcatgacgt	catttcgttc	gtggctgcag	65880
ttacagcttc	taaaaagtca	gaatctttat	actcgaacgc	tttcttggc	tcatctaacc	65940
agtcgtcagt	ttctagatct	gcctcctctt	cctctttttc	accttctcc	attttttctc	66000
cctcctcctc	tactcatcc	atttcatgga	atttttttaa	gaaatctaaa	aagtcactcg	66060
tgtgtttatt	ttgttcagtt	tttaagattg	acgtctgctc	agtagataga	cctgggtattg	66120
acgatactat	tcctcctcct	cctccatttt	cttctcccaa	tgcttctgga	ttcgtatcta	66180
aattattacc	aaaaacatca	atcctttctt	tagtcaatat	tcccctatca	ttaattatac	66240
caccttcagt	gtggctctca	aaaaatccac	gaattgattc	gaaaactgac	gatgataatt	66300
tttttagtaac	aggtgcactt	tttctggttg	cattaacctt	acttttctta	cgggtagatt	66360
tttgagggtc	attaccactt	ttacgtttat	tattagaaaa	tgggataaga	tcttcagtat	66420
cagattctac	atccgaccct	gtattttttac	tctcattatt	attagcaccg	gaaagatgta	66480
tactgatata	tgataaggtt	gttattgtac	caaaaacacg	ttgattaaag	gaccccat	66540
tcaaataatga	catgacattt	gccgctgcat	ttacagccag	ggctctatga	agtgcgtgtt	66600
tcaaactaac	gtcagtttcc	aatcaatca	agtgtgttgg	aggaaaacac	aactgaagcg	66660
ggtctcgtac	aaaatctata	gcttgagaca	gatagaaaaa	tttgattgtc	cagaaaggaa	66720
gtactagttt	tttctacaat	tactttttaga	caaattcccc	atagaaatat	66780	
taccaacact	atcatcacag	tctttattat	tcttcctagc	ttcttgttca	ctcaaaaaaa	66840
tctcccatcc	gccacacaaa	gtacagtacg	tgttttcaaa	tactgcaact	tctttcctta	66900
cccatgtgtc	gtactcacag	ttactaacia	ttgcaactatt	gtagtctgat	cctttagtta	66960
gcataatcaa	tagtgtactt	tcagggtgaaa	gcatgagcgg	cgattctgcc	aaattatata	67020
tctgtatttg	ctttttagtt	cttttagctg	caaaaccacc	caactcgttt	gcttgatttt	67080
caccgaaga	attactgttc	atgcacctaa	agaacttgac	atggccaatc	tttaagaacg	67140
tttcagagtc	cttaaatgtt	gtaccagtaa	gacgacacac	gtttttatga	tgtccaacca	67200
tcagggttcca	tttcaccagc	acatcagaat	cgtgggagaa	aagattcata	gaaagtgttt	67260
gattttcatc	gttggtgtgt	tgcttcaaaa	cattcaataa	atcttccac	ctcttggtat	67320
cttttctgtt	accagacata	ttataagaat	cgtactccaa	tatcttcttc	ttttctagta	67380
gggagaagtg	tttcccagga	gtctccagat	tcaaaaggca	tgatgttaaa	cgtagcata	67440
catcctctgc	ttcggtgat	gatgcattag	aaaggatcat	gcatttgctc	cccgtagtct	67500
ttagaacagg	gatcctcatt	atgtccagta	atgagtagtc	catcagacct	tgaggagac	67560
gcacatcat	ccgctcgac	gagtagaata	gtagatcggt	ggtcttctta	ttgaggcaat	67620
tttcatctct	tgattttgcc	ttttccttac	ttctttcttg	tctgatctgt	cgtttggtct	67680
tcgtcatcat	cttgatggct	ggagcctttc	catccgtaaa	gagtacagta	tacctcctt	67740
taagggtttt	agacttgagg	agatttttca	tcactcggat	catcctaaaa	gcgtagtaca	67800

agatgacccc	ctccatctgg	ctagcaaaaa	atgcatcttt	gaatctggat	ttcaaaactg	67860
ctgtcgggga	agaattgaat	gaagtagtag	gcacgttcct	gaacaagaaa	ctgttagtca	67920
aaaacttcct	cttcttcata	acatctgtgt	gtttgttgat	ccagtaatcg	agaccctcat	67980
agtcgtccat	tttgtgatta	gaaactggag	gagccatcat	catgtcttcg	attggagggt	68040
cagttagcca	atcaacttcc	tcttgggatg	aagggattat	aataggcact	ctttcaattc	68100
tagccttaat	tttctcgtgt	ttatatTTTT	tagaaaagaa	ttcagaaata	accttctttt	68160
catccctgca	gtaaaaattt	tcataaatat	gtttcttggt	ctgcatccgt	gaatgcatag	68220
tatcttcttc	cctgataaca	ttaaaaccgt	catgtaaaac	gtctattatc	tgttgatttg	68280
tagtattgat	aaacaggatc	atctgaccca	tatttttctg	tcccttcaac	atgggtgggtg	68340
caatttgcc	gcccacatg	accagatctg	atcacattata	agtgggcaaa	tcaaccatgt	68400
cgagtgtgta	gtcacaggta	ggtgaagaag	aggaagattt	cttgccctct	ccaaaatcca	68460
ggaagtctt	ggagtgtgat	ttggcaagag	aagtggcttt	gagaagtgag	ctagttgtgc	68520
aatcttcttc	tcctgaacaa	taatcctcgt	cgtcttcgtc	atcgtaacaa	tcttcataatc	68580
cagttttctc	cttgatgact	ctcccattct	gtgcaccgta	cgcattttctg	tacatttttt	68640
tggcttctgg	gacaccatt	tctgttgatg	ttactccac	gggatgttag	acgataatga	68700
atgctcactg	atgggcgcg	taatttttac	acactctgcg	tagtctgggtg	tttttaccct	68760
tcctagaaga	acttcgtgga	gctgctttaa	aggttgtagt	gcttggaatc	tgcagcaaac	68820
gcagctctct	acagagactt	ctcggagact	tgccagaagc	gagtttctct	ttcttaatatg	68880
gggtactttc	ttcctcttcc	tgttggttgt	tgtagagtgt	tatagattca	gtagggaagt	68940
agtttctaga	tcgaagaaca	gtgtagttct	cttctctttt	cacagtctca	atagaattgg	69000
acacctcgtt	gaacacttct	agggccaatt	cccacacacc	ttgttcttta	agtgctctga	69060
ccacgtaatc	aaattcggat	tcactcaata	actgtaagga	ggaagaatct	ccatccatga	69120
tacgaatctg	gaacacctgt	ctcctccttg	actgttaact	gatgtctgac	cccttgtaac	69180
cactttactg	atgttttata	ccctctcccg	acggaagatg	tatacgtcac	aatTTTTTTT	69240
aaaaaataac	gttatacacc	aaaaatgagc	gatacagggc	agatggaaga	aaataggcct	69300
gctaccgaga	aaaggagacc	tggagatgaa	gaagaggaag	aaactggtag	tagtaattgt	69360
ccatattatg	ccaactttgg	cgtatgagcc	acgtactcca	tgtacactgg	agaaggaaaa	69420
aggggtaaat	ttgtattaga	gccacctaaa	gaaagaagtg	tacaaagggt	gcaaaaacca	69480
cctaaagaaa	aggaggaaag	ggaacaacgt	tctaattgtt	ggacacggag	acctggtcaa	69540
gagtttgaac	agaaagtgtc	acaagatcga	tcgcgagaac	ggtcagaaaa	acttgggcaa	69600
aatttggcag	agaaaggatt	gcaagaacgg	caaaagaaat	atactccaaa	ggtagcaca	69660
acaatgacaa	aaaaataaat	caggtttcgt	gaaggaggaa	gaaaaattcaa	ggcgccgcaa	69720
cagcagacat	ctgacaaagg	tgcagcaacc	aatgttcttg	aaagggaaga	aattgagatg	69780
gctgcagaaa	gagaacaacc	agtagaaatt	acaggagata	ctatattagg	tgggctagga	69840
gaagaagatg	acgaagatat	gggagaggat	gaattaacta	tacaacattc	atctatggct	69900
gtatcacaa	ccgttcaaca	aatcgtttgt	agttctccta	taccgccaaa	gcccactagg	69960
ccgctcctg	atattcccat	acaagaagat	atagtgggga	aaaatattag	ccagttacca	70020
ccattaccac	ttgatgatta	tgaggacgaa	gaagacgaac	atgtgtacga	agaagtgaat	70080
gatttcttag	tggcaccacc	aacagcagca	cgacagctt	ccacaagacc	tcccaggcct	70140
aatattcctc	ctccacctcc	tcctgttggt	gctgttgtag	acgaaacctt	gaagaacttg	70200
gcttcaattg	cagccttggg	aaaggaggcc	gaggaacaaa	gagcgccgc	agttgaaagg	70260
gaaagagaag	tagaggaaaca	aagagcggcc	gctgctgctg	ctgctgctgc	tgctgccgcc	70320
caacgggaag	cagacgaaaa	aagggaaaga	gaagcagagg	aacaaagagc	ggccgctgct	70380
gctgctgctg	ccgctgctgc	ccaacgggaa	gcagacgaaa	aaaaggaaa	agaagttaga	70440
gaacaaagag	cggccgctgc	tgctgctgct	gccgctgctg	cccaacggga	agcagacgaa	70500
aaaagggaag	gagaagtaga	ggaacaaaga	gcggccgctg	ctgctgaaag	ggaaataact	70560
gccaacaac	ttcaagaaat	gaaagaacaa	atgcgcataa	aggaagagga	gaggcggaag	70620
gaactagcag	ataaggagga	agaaaaacgt	cgagaactag	cagccaagga	ggaagaaaag	70680
cgtcaagaaa	tattagctaa	agaagagcaa	cttgaaaaat	tgaatttcca	gttgggtaca	70740
gaaatcacgt	ccaaaagagc	actcgaacaa	atgttagaag	aagagaaggc	ctcacgtctca	70800
cggctccgag	cagtgacaca	gttagcgatc	caagcaatag	aatatgagga	tgaacttctc	70860
caggcagtcg	aacctcaagg	acagttagtt	cctatggata	cggatttcta	cggaaaaatg	70920
tacgatctca	ataagaaatt	agaagtacag	aataatacat	taacttctgc	atgtgaagac	70980
gtgaacaaaa	caaacgaaca	gaaccaattg	gttgctcaat	cccttgaaaa	atccgctaaa	71040
gccattgaaa	aattaactag	tcaaaaaacat	cttctctgtg	atgatcctgc	ttttatgcag	71100
agaataataa	cagagaggga	tttttcttta	aagaatctgg	gaaatgttta	caaaagagtt	71160
ctcgggtctc	attttacctt	aaaaagggac	ctttttaaat	cgaaggcatt	aattacagat	71220
aaagaatcaa	gggatctgga	ggtgcgtcta	acagatgtat	cgacagatct	cagggtcaat	71280
gatctcaata	caatactgga	aaggttggat	gtatccgtta	acatacgtct	tgggtggaaca	71340
ttatacacta	aattttacaga	ggcagacacg	gcattagcag	atcaagttcc	ttcgaggatt	71400
gaaataagta	acagatcaag	atctgcctta	ttgccatttt	catctgcagg	tttggtact	71460



aattttacta	atagttccga	caagtacaat	gaaatagtga	accaactaag	cagtataaat	71520
gaggctatga	atatttttgaa	agaaaatatt	gtcccaacat	tgaaccaaaat	caaaattgat	71580
gtcaccaatc	tattaacagt	ttcaagctct	cgtcaatatg	ctattgaaga	aagggtgtat	71640
tctgatgtgt	cccgaatgga	ttctgaaata	agaaaattcc	tcgctataat	gaacagtaaa	71700
atatcccctt	atttttaaagg	cgattggacg	gatgaaagac	aacgctctat	tgctgacagt	71760
atttcctctc	agataaaaatc	aaacgataaaa	attaaagaga	gtgttgctac	actacacgat	71820
atcaatatcaa	cctcaagaat	acgtagtaat	ccccctctgc	acaaatcctc	agttttatca	71880
tctccagact	ttttaaatgc	tgtaacgac	tttagaaaatt	ttctcgatat	ccaaggagggt	71940
tctcaattta	cttatgatgt	cctttcaggc	caaaatattg	atgacctttc	actggcatca	72000
aaaaccactg	aaaaggttac	agaattgtgc	ctcgaattat	ccataatttt	agacgtgatc	72060
cataaaaaatg	ctttgagttt	aaattttgcct	gcaattactt	accccgacag	ggaaacatct	72120
atggaagaaa	gtggttcatt	ggctgttgac	attagacaag	aaattggtaa	gaacatatca	72180
gattcttagcg	ctgaacttag	tcgcacactg	tcagaggcgt	tacaaatttt	tcagcaacaa	72240
cagcaacaac	aacagcaaca	attccaacag	cagctgttac	aacaacaaca	ggaccaacaa	72300
aatcaacaac	aattattaca	acaacaaata	gaagaacaac	aacgggttca	ggaacagcag	72360
caacagcagc	aaagggacca	acaacaacag	gaacaacagc	aaagggaaca	acagcagcaa	72420
cagcagcaaa	gggaacaaca	acaacaaagg	gaacaacaac	agcagcaaca	gcagcaacag	72480
agtgaccagt	ttcgacaaca	attattgcaa	caacagcaac	aatttcagca	attactacaa	72540
caacaaggaa	gaagaagagg	gggtgacgat	ggtgatgaag	aaagagagga	aagagaagaa	72600
ggggctgaaa	aggatgattg	tgtgcgtaag	gttgcagaat	cagtagcgac	aaaatatact	72660
gctgacttga	ctaccttatt	ccaacgagaa	gaaaataact	tccaatctaa	aatagcatca	72720
gcaaaatttg	gaacccttgt	ctttgccacc	cctccttcac	ctatcatgaa	cttgacaaaa	72780
ttgagagagg	aatattccac	attcacaacc	cagtgttttt	caaaactaac	agctgaaaat	72840
aatagtatta	tgcgatTTTT	ccccgagagg	attgtagaag	tatgcaagag	taagaatctc	72900
aatttaattgg	gaaaataactt	gtacattata	actaccgcac	aaacagaaat	ggaagatcga	72960
gtgaagaata	tattgtctgg	tattttcaat	caaattgaag	agttttcaaa	caatatatac	73020
caacaacaac	aacaacaagc	tgcttcagct	tcttctacta	atcctcctcc	tccttctact	73080
ccttctacta	ctcctcctgt	tacaagcatg	caagtttgtg	agttggatga	tcaacgtacc	73140
ctagaaaagg	ctgccatagt	agaggcaatt	actctggcca	atgctgtact	tcaaactaca	73200
aaatccgctt	cagctccttc	cacggcgggt	gagcgagaaa	ttgctctaaa	gctagagaat	73260
gggaaaacat	ctatccgtat	ggaaaaagtg	gatctaagtt	caggagctac	tggtgtttcc	73320
gaccaacaaa	aatggatcga	cgaaagtact	tccaaacaag	aattggaaga	tttcattgca	73380
gaagaaaact	ttgtagaaac	tgacataat	gaaatggata	ttggattaat	tttggatgcc	73440
aagaagaacg	atccgaccgg	tgatgccaat	cttaggctcg	tgaacacctca	tgaataaat	73500
gtgcagtctt	tcccatatta	cgtactccgc	acatggctag	gagaaacaga	tatatggat	73560
gaagatactg	tacatcctga	atatttccgc	caatacattg	atcgcaattg	gaagggtggaa	73620
gaacatgagc	gtgaagatac	attaaaggca	ctgggtgttt	ctttatcaga	tacgttggca	73680
cacatcaagg	actactattc	tcccagtgtc	aaaaatgatg	catcaaaatc	agtaccattt	73740
gcgttgaaaca	ctctatttga	caacatattt	gctatcgacg	gaggaaatgat	ttctagcctt	73800
tcaagaacag	cctttatttga	ccgtaaattt	ttaaggcaat	ctatgacaga	taaagagggt	73860
gctcaaggac	ctgttcgggc	tcaactgtgt	gaagcgacaa	tagcgtctct	tttcacggca	73920
tgtagtaacc	ttcttcgacg	gtctccctta	gccgataaag	tagaaccacg	ccttcaagaa	73980
aaattagcgg	ccgctgctgc	tgtagacacg	tcaaccggag	acatgtttcg	tatacgagtt	74040
tgctactctca	tgtacaattt	tatagtggct	tatgtgaacc	tatgcaataa	tcgtataaac	74100
tatacgttaa	atgtattgag	agcgtcgggt	ctggcaaaaca	aaaaagtcgt	ggccgggtaaa	74160
acaactaaaag	ggcatacatc	ttcttcccac	cggtttggat	cttatgatgt	cacatatgat	74220
ttttcagtat	tgtacaagat	tcttcaacta	caaaaacaga	atatctcttt	acttttagag	74280
aagggtttca	atgcatggga	atcgtgtgtt	gccgccatgg	cagccttcac	tgccgaccct	74340
tctctctcca	tctcagatga	cgaccaatcc	atactcttcc	cactagaagg	gggagagatt	74400
gttattgaaa	aacatgaaaa	cgatgcagaa	aaaaatgtcg	atatggttca	agaattgttg	74460
aaggaaactg	cactcacact	catggcaaa	gaactaaatt	catactacaa	ctgggtcata	74520
tacagtaagg	ataccgatat	ggaaaagttg	gcgagagtgt	gcaggatgat	tatcggtata	74580
gttaaggctg	ttctcagatt	aacaaataaa	gccgagagtt	tagtagacac	taatgctctt	74640
tctgatattt	tcaagctacc	tgtgattcca	attgatgata	ccaaaactct	ggcaataaat	74700
attgtggtgt	tcactttgaa	taatgtaatt	aaaccatgga	tggtttcgtt	caagcaaatg	74760
tttagacaga	aagacggggg	agtttcttca	gcctatttct	cgtttcaaaa	tatccaacaa	74820
caaaaacatc	acaaaactgc	ttccatttga	gatgcatggg	cttgcgcgcc	cggtaagtta	74880
acaaaggcag	cacacgtgtt	tatttcagga	tatgaaaatc	atatcaaatt	aaaaaaagat	74940
gatcttttat	ggggtgcttc	aatgaaattc	cctgccgacg	gacgaggcac	tgtggctgaa	75000
ggatgggccc	aacaatacaa	taacgaaagc	gtattggaag	attttaccga	cttttcaatt	75060
gaagtaaacg	cacctgcctc	tggactctta	ataccgccag	atcctttact	ttcttccatg	75120

ttcggtaaag	gaaatggtgg	aagcagcagc	agcagcagca	aggataatac	aattatttga	75180
aagggaggat	taatttttaaa	ccgccaaagt	gttggacaag	aacaagcacc	accaataaac	75240
acgtcgtcgg	atactaaaaa	aataagacgt	gatgcaaata	ttgaaccaat	aatagggacg	75300
ccttatagt	taattaaggc	aagtaaagga	gtatcaattt	cagtactgga	tgatttcaat	75360
gaggatagtc	cagaagattt	cgcccttaaa	acttccatca	tcaatgatgc	catacgagaa	75420
atagggcaac	gcatgactta	tacaagacct	atattttgatc	atcaaacaca	gaaaaatata	75480
cactacagtt	cacctaaaa	tattctcgaa	ggatcagatt	taaagaatgg	acaacgttca	75540
ggacaatcct	gggtcccttc	ttcatcatcc	ttgactctgg	cctccgattg	gaatctacct	75600
tctctggagc	ttttatatag	agaacttgcc	acaaaacaag	tagagaagga	agaagaagaa	75660
aagagcgaaa	gggaagaaga	taaaggacaa	aaacttaatg	aaaaattatc	atttgtcgtg	75720
aataaagcta	tcggaactat	ccaacaacaa	catcaatatt	ctgaaagggg	aggaggaatg	75780
aagaggatc	agcaacactc	tgctgatcaa	gctagtaatg	gtggcataga	tgatatagaa	75840
cttatgaata	gtaaagatgc	tacttccatg	agaaaggcaa	aactggcatt	agccgttact	75900
ataaaaattg	cagcagcagc	agcaagggat	ggggaaaatt	catcagctaa	accgtcaaac	75960
tttggcaata	gattggatga	agcaataaac	cctggagcac	ttttattacg	tagaggagga	76020
ggagtaagag	gaggacaaac	accccagagt	tcaatgctaa	caatgttccg	tcctggacaa	76080
actggtggca	atagtagttg	gtggactact	aatacacccc	ttattcaacg	cacaactagt	76140
gttgggaata	atttagttgt	gcttgtaccc	aacctatttg	attcacaccc	tcctacattt	76200
aattaggaat	aaggaattat	acacatttat	ttgtatgttt	tacatgtatt	ttattcaaca	76260
ataaaggtta	tgatcataca	taatcaactg	gttggtttat	tacatagttt	ccattctatg	76320
cccttccaaa	aatgaatttt	gtacctcgga	atacaatttc	ttccctcggg	ttacaaagga	76380
aattgcacgg	agcgaatctg	ctcacccatt	caccaacaac	accctcatta	atcttcccat	76440
gagtgatgtg	aggattcagt	ctgttgtcag	cgagttcaac	atttctccct	attgcatctg	76500
aaatgtgttc	cattattcgt	ctacgcaaat	cgagtgcac	atctccaaca	catactttgg	76560
atacgagaat	gttgtgttc	atcccaaaca	actcaaaatt	atcccagtg	tcgattttga	76620
tagctggtgc	aaaacaactc	ccaaaatctg	ttttcatcag	agtattgtat	tcttccatat	76680
ttcgcaata	gaaaacagaa	atggtcacat	gtggaggcaa	ctgagaaaat	gatttggaga	76740
cgtgtttctc	agataataat	tttcccgttt	ctgaatagaa	aggaagtaac	tcttcgctgt	76800
agagagcaaa	gaacattttc	atttcttcac	ctttaaaatc	aacttgattt	atagtgaaga	76860
ttctattgtt	gtgtttgatt	gaaaatttgt	tcaccacttc	aaacatgcca	ttgattttgt	76920
tgatcatttg	cttgactcgg	catcttcttt	gcacctgtgg	ttgagttagat	gaaggggaga	76980
tttgggtgcc	attatctggg	tggtatccat	tcaattgttt	gtagccggca	caagggataa	77040
ctgggtccac	aaacttgaaa	gcctctctat	taaaccctct	ccctagagga	ataagtccac	77100
aacgaatttc	gtctgcgtct	tctgccttgt	ccattaacat	catatttaga	tgcaacaacat	77160
atctcagaat	cccattcaag	gtgtgttttt	ctggatagag	gcaaaataaca	tcattccacat	77220
attccccatc	tacataaagt	ccagtaacaa	caatctttta	cgcttttagat	aaaacaatag	77280
tttctctatg	agaaaaatatt	gccttgttta	ctttgggtgga	gagttgttcg	tcactgggaa	77340
tggcgtaga	ggccaagagt	agagccttgg	aggaaaattt	cttgtccata	ggaagctcgt	77400
gccggatatt	gtctaccatg	ttagacatag	aagtattatc	actaaagtca	aagaagacta	77460
ctccattttc	tggagagggt	ttgttgaagg	atagatgttc	ttccatgggt	gtggtgggtg	77520
ttgtgatggt	ttgaatgagg	tgtggtacag	tattatata	cacgtgggcc	ctttttaaaa	77580
gggggaggga	gggggagagg	gttgccatca	agcaatatct	tcgtccagaa	acacctgggtc	77640
cagaaatggc	cataagatag	ttcctctatt	tctggagcta	ttacatttct	ggtgtaattc	77700
gacattggcc	cgaccagag	gtccacccct	ggaacttgac	attcgggtcg	gctagcgggtc	77760
caccccctaa	actggagcgc	cctaaaaaat	ttttgaaaag	tttttgagat	ggaggaagag	77820
taaaattctc	tagtgaaaac	agaagggtat	accctctcat	ttctgggtcg	accagtctcc	77880
agaaacgcct	gttcagaaa	cacacaaaag	ttaatgtacg	tttctggagc	tattacattt	77940
ctggtgtaat	ctgacatttg	cccgaaccag	cgggtccaccc	tcggaacttg	acattcgggtc	78000
gagctagcgg	tccaccccct	aaactggagt	gccctgaaaa	aatttttgaa	aagtttttga	78060
gatagaggaa	gagtataaatt	ctctagtga	aacagaaggt	tataccctct	catttctggg	78120
tcgaccagtc	tccagaaacg	cctgttccag	aaacacacaa	aagttaatgt	acgtttctgg	78180
aaccaacaat	ttctggtgta	atctgacatt	ggcccgaacc	agaggtccac	cctcggaaact	78240
tgacattcgg	tcgagctagc	ggtccacccc	ctaaactcga	gtgccctgaa	aaaatttctg	78300
aaaagttttt	gagattgaag	aggagtaaaa	aactcactat	atgaaaggtg	tgtagaacac	78360
catatccttt	ctaggcacgg	ccatgtccag	aaacgcctgt	tccagaaaca	cgaaaagtt	78420
aatgtacggt	ctggagcta	ttacatttct	gggtgaatct	gacattggcc	cgaccagag	78480
gtccaccctc	cgaacttgac	attcgggtcg	gctagcgggtc	caccccctaa	actcgagcga	78540
ccctaaaaaa	tttttgaaaa	gtttttgaga	tggagtaaga	gtaaaattct	ctagtgaaaa	78600
cagaaggtta	taccccacct	tttctggatg	cgactagatc	cagaaacgta	tggtccagaa	78660
atacccataa	gtcctttcct	ctattttctg	aaccaacat	ttctggtgta	atctgacatt	78720
ggcccgaacc	agaggccac	cctcggaact	tgacattcgg	tcgagctagc	ggtccacccc	78780

ctaaactcga	gcgaccctaa	aaaatttttg	aaaagttttt	gagatggagg	aagagtaaaa	78840
tttcttgcc	gaaagggtgc	cagaagtgtg	aacacacaca	cgcatctctg	caccttggtca	78900
ccatcattaa	taaaaaatgt	ccccctccgc	ccccccctca	aaatcgggta	taaatagagc	78960
tcaccagcac	accacagaca	tcattctcaa	gacattttcaa	gtactgagaa	catcctctcc	79020
tcttggtgata	ttattcaaga	aaacctactg	aaatcgtccc	taaaaatggat	tttgaaggaa	79080
ctaccagttc	tacccccctca	aaaatgtccc	agttgtattc	atcagtgaag	aaagttgcag	79140
agcattcctt	tgccaatcct	catgacaagg	ctactcttgc	atcaaagggt	attaaggacc	79200
tggaagggga	gaggaagaaa	atgtctaccc	caaagtcctc	ttctgatgga	caaaaaactgg	79260
acaaggctat	ggttgacgat	attatcaacg	agtatcaggc	cgtaagagc	actgcagata	79320
attccattga	atcgaccatc	aaggaaattg	aaaatgtact	tgaaagtgtg	cgcaaacca	79380
agattgaaag	tgaagccaag	aacagtgtaa	cttccagccc	agaaaaagtg	ttttctgtcg	79440
aggatttaga	aatctactcc	aaggggagag	tgtgcaaagg	tctcaagtta	aacgcccaact	79500
gttcaagaat	tggaagcaag	tatgcagtgt	caatgagtat	caaaaaacac	aacgtctcct	79560
catttgagaa	caacaacaac	caagttttct	ctgaagaacc	cagggattgt	tttatgcttg	79620
aaacaaccta	tcctcttggt	gggttcgaaa	cttctacaga	agatggaaat	acatatgcag	79680
ttttcttgac	tggtgttggg	ctagaaagat	ctctacctaa	atatgtacca	gttttcgaca	79740
tgaatgcagg	tattcaaacc	ctaaacatga	ctggtttgag	gatggccaag	cttcctgttc	79800
tgtgcatggt	tggaagctaca	gaatatgaca	acttggaaga	tttttacatc	acttcaattg	79860
agacgcagtc	ttttgacgaa	gaggaaaatg	atgcagaaat	gaggtgtcac	accgaagatt	79920
tggaaggaa	gaagcgcatg	aatgacgcac	cagcgattac	acctcatgtg	gccgtgtacg	79980
actacagtgg	agacgggaaa	gaacaattgc	tctatatgat	aaccgagtat	gaaaacacgg	80040
ctagttgggtg	caacgcaaac	ggtgtggtca	catctgacag	tggttttct	aacgaatgtg	80100
caattagtga	tatgaatgac	ttgtgctggt	ttgctgactg	catcgatggt	actgttaata	80160
atgaagaaca	tgaagaacgt	tctatgaata	ttgtggctga	atctgacagg	cgctcttttg	80220
atgtcatgtcc	ttccccatc	aagacggaag	aagatggaga	aaattcatcg	tcactcgtct	80280
cctctccaac	agttcctcct	cctacaccat	acgaaggtaa	cgcagttgtg	gagggggagg	80340
aagaagagga	agaaattgat	gaagacgaaa	gtagcaagta	tgaaggttca	gaagatgctc	80400
ttgttatgaa	gaaattagcc	aagctttcta	ctatgaaaca	aatgagaagg	gttaagaatg	80460
aacctgcact	caaaaattact	tctgggggta	acaatagtag	cagtagtatc	aataacgaag	80520
atgatggtga	tgatgacgat	gccgttgacg	ctactgcatt	atgcccccaa	actgaagcta	80580
cagtgaaaaa	ttccttcatg	gccccaaacg	acgagagaac	tgaaaatatt	ttgtatgaaa	80640
ctatgcaaat	ttctttgct	aaaatttgta	ataatccatc	atctatgagc	agttaccgtg	80700
tattcaccaa	caaactccaa	gagtgtttga	ataccatgga	cgatagtatc	cgtcgccgtc	80760
caaccatttg	gactgaagaa	agtcaacaat	ttgctaaggg	tttgttgttt	gatgagggtg	80820
tcacatcaat	tgtggcacat	cagatggctc	aagatatttg	caagtctgaa	atatttgagg	80880
gaatgtttaa	cgccaactct	accaacatta	agggtaaaata	tgaaggacaa	aagaagagtc	80940
tgtatggaaa	caagcacatt	tcttcctcgt	gcttcaaaac	caacacggaa	tctaattgtga	81000
ataatgcact	atgtgcgtgg	gtgaaatcga	aactccattc	tggcacagtc	atacctaacg	81060
tattctcctt	caaaatggca	tcagaaaagc	cctcaaaaat	gaagcgcaag	cgtaacctcta	81120
gtgcttcac	atctaacgat	gaacaccaag	aaccatcaac	aaaaatgatg	aaaaatgatg	81180
aaggggaaaa	ggttgacaaa	gaatcatcat	ctccttcttc	atcgtctaca	ccagaacaac	81240
aacaacaagc	tggtcatgac	aaggaaacta	tcaatttaat	tccccctcagt	ttcataaaaa	81300
tgccacgcag	taatgtcaat	ggctcggctt	catatttgtc	tgaaaatattc	ggtcaacgtc	81360
tttgtggact	gtctgatgct	tccagcacat	ttaagagaat	gtgcaagact	tttgaagatc	81420
ttgaaaatga	aatcatgagg	agctcattca	ctagactgac	tagatatgag	agggaggtaa	81480
ctcgtttgta	tgagaaatgc	aggtctcaag	ctgtagatat	tgaggaaaat	gaaatggatg	81540
ttttgtctca	ccaaggggaa	ttgtttgccg	agttcttgga	ggacccgatc	gcttactttg	81600
aagaagtact	ggagaatatt	aagagtggga	gcctagaaaa	cgtaaacacc	cctaagcgca	81660
aaaacaagta	tgcaaaagta	ctggtgagcg	ttaatgtctat	tcgtaggaca	tatgaagaat	81720
accatgcgtt	tagcaagttt	gtaccaatgt	tcttggtcaa	tctgattaaag	agagaattgg	81780
aaggagacaa	ctatacccat	gacgtttcact	tttcttccac	ttgcctgtgg	tacctgactg	81840
taatgaccag	gaacaggatt	tgcatgtg	tccagtacat	caacaacaac	aataatgata	81900
acgaagaaac	cgatattgtg	gaggaaagag	aggaaggaga	aggagaggag	gataaaatgg	81960
aagaaagtat	ggacgtagaa	caacagaagc	aagttcgcaa	gggagggaga	aagaaggggtc	82020
aaaaattcaa	cagttattgg	gatcaagtca	ttagaaaaat	tgtgaaaagt	ttgtgtgaaa	82080
attcgatggt	agtttctatt	gcaatttaata	gtttgatctc	tggaataagc	tggaataagc	82140
agaaaaatccc	tccgggtttc	ttgaaggatt	ctagcacaat	caataccctt	gatgaggtct	82200
caagggtttgt	gttttagcgat	gtcaaaatca	ataggaaaat	caatggaaca	gatgataaat	82260
atgaaactgt	ttttggagtc	agtacgcgtg	tggattcaca	tattgtaggc	ccctttagta	82320
tacctgttga	tttttcaagc	gcaggactag	ataaggcctc	atgtggcaaa	ttgtacgtta	82380
acaccataga	cggaaagggc	attttgacaa	tttcacccaa	atatgattca	ttaaacgatg	82440

aggatgttga	ttctactaca	acagacaagc	tagagaagga	tattttgcat	ttgtctaaagc	82500
atgacacctt	tttcaatatt	aataagaata	aggttcttcc	attctataat	atttctccta	82560
gctcttctct	cactgaaaag	aaaaagacaa	aattcaatag	gaagaagatc	tcatctggta	82620
tgagcaataa	taatggcatg	tgtgtacaaa	ctccttctag	ttcaaattca	gtctcttccg	82680
tctcgtctat	tgtagctcct	tcatcttctg	ttctggctct	atcttgctcc	ctttcttcta	82740
caaagaaaaa	gagcatctgg	aacgagaaca	tgtttttgac	atctaggaac	atgtggaggt	82800
gtggatttgt	tgtaccaccc	aaactttgca	gttttattgt	taaccataga	cacgctgtaa	82860
aacttgtagc	tgaaactgca	cctaaaacaa	agttgtgtag	gaatattatt	gataggaata	82920
ggaagattag	atttaacggt	ctaaagaagg	tatgcaagag	tgtagcgcc	tttaccggcg	82980
agtctacata	tttgcataat	aagaatatga	ctgcaacttc	acctagtgat	ttgaacctat	83040
gtattttatac	ttcatcttta	aatgacccat	tgtatacttg	taaattgacc	catgaagagt	83100
accaggacgg	aaatgctttg	gatgactatg	gtgcagtttt	tgtaaactat	acatttaaga	83160
gtatcaaatc	ctgctcgtcc	aaagatgaaa	ccgctgacga	caatgctgct	gctgctgatg	83220
atgattgggtc	tactacttct	acctcttctt	caactgatac	tgatgctgct	gcaatccaag	83280
actttatgca	tgtaattgatt	aagaaaattg	atgccatgaa	agacattaga	ggaaagtaca	83340
agaaatcttt	ggcaaagaaa	acaaagaagc	attaaatgta	tacctttatt	tttaccaata	83400
aaaatttatat	gttttacatg	ttgtgtttta	ttcaaattca	tatggttcat	ccccatttaa	83460
atcgtctaac	cccatatccc	agtcaaacgc	tgctgctgct	gctgctggtt	caatgtctga	83520
gccatagatg	gattcattga	catctaaaag	ttcatctcta	aaatttcctg	gtgtacgcgg	83580
ttgacgaata	attggtgcaa	taaatgcctc	ctcttcttct	tcttcttctc	ctctgactcc	83640
cgtttccttg	acagcttgac	gttgcgcttt	tattatctct	tcaacgttcc	tccctggagt	83700
agcgggagga	agatcaaaat	caatactgcc	aagctcagag	tctatatcag	taaaggacat	83760
atcagtagcg	ttttcttctt	ctgctcttgc	tgtagacgga	ggaggaaagag	gagtaggctt	83820
gggtagaact	ggtgtaggtg	gaggttgagg	ggtagtagaa	cgagagtcaa	atcttacacg	83880
ggaaataggt	ggagaaggag	cagtattag	tataggagga	ggaggagggg	gactagaaat	83940
gagttgaacc	ggaaagggtc	gctgctgctg	ctgctgggga	ggaggaatat	tactgggtga	84000
ttgttggtga	ggagtagggg	gaggaggaat	attattgggc	ggctgtggtg	gttgctgctg	84060
ctgctgctgc	tgctgcagct	gaggcggcgg	ctgtgattgg	ttgcctaaaa	agtacacgcg	84120
gtactgttgt	tgtaattggt	gaggagcata	tgggttataa	tactggttat	attgataata	84180
aggatttaag	tatccttggt	aagtaggttg	ttgaacctgg	aaagtgccct	gtggtggagg	84240
aagaggaaa	ggaggagggt	ggaaaggggg	aaattgttgt	tggtgtgtgt	gacgttgctg	84300
ttgttgttgt	ttgggcacaa	acactccagt	aatgctaatta	aatgcttgac	ttgtttctct	84360
cactgcactc	tttatcattt	tttcaaccgg	tcttgctgaa	gctcttgcta	aaacaccagc	84420
tgacacattc	tccagcatgg	agatagaatg	ctctgattta	ctcctcatcc	ctcctccaac	84480
caaaagatcc	atagtcgatg	acattttttac	ccacacgtta	ttattttatag	ctctaaaata	84540
acgagggtatt	gataggccac	gtacagtggc	gttagagtta	tcagaagcta	cagatacaaa	84600
attcttatca	aagttcttgt	tggtaatat	acgtgtacca	aacaggttat	tacacacagt	84660
agcaagttgt	tcaaaagtata	ctcgttcttt	cacagttcgc	tgatatacat	cctccacagt	84720
actgctcatt	aaattgttta	tctctgttgc	atttccatcg	ttaagagatt	tcaatatattt	84780
tgaacttaat	tcttgccact	gaatctctcc	tgaccgtata	tctttcctat	gggaaattgc	84840
ccaacaacta	ttagccagaa	gagctttcac	caattcagca	cccacatttg	tgacaacaaa	84900
agtgttttgt	ctttttcctc	cgaacttttt	cttcccttgt	tcagatgaca	ataaagatga	84960
tgaagtagga	aaagccttgg	ttttatttgg	ctttaaaagg	ttagctaaaa	gagaccttat	85020
tctgtactgt	atagccttct	ccttgaccac	tgctcctgct	gccaagtatg	acacgttaac	85080
gtattgtggc	gcattttcac	tccttacacc	taaaatagag	cccgaagtta	tagcacctct	85140
caatggctga	gacacggtca	tcatttttcc	agcaggcact	gctaatgcct	ttgattctgt	85200
gtcacttctc	tttctttttt	tagagggagg	aaatatgtgc	tttttcattt	gttttgcccg	85260
cttcgatata	gatgtagtag	gtgtaacatg	ttcgtcttca	acattctcct	cttcttctct	85320
ctctccatct	tttcttctct	tctcttctcc	ctgttcttcc	ttttcttccc	gctgctgttc	85380
ctcccccttc	ccttctctct	tcccttctct	ttcttcttca	ttacctcctc	ctcttccacc	85440
accttcttga	tcagtgtctc	tttttccctc	atcattttct	aaatctgaac	aatcgccagc	85500
aacacaatcg	ccactccttg	acagaatttt	actagtacga	atcttacgcc	tttgcttatt	85560
cttactagaa	gttggcgcg	ccaattttaga	gacctcctga	cccattgttc	gttggaatct	85620
ggattcggcg	tcattcctct	tttttcggtg	ttggttccta	attatatgct	tttttaaagc	85680
agtattaggt	ttatgtttag	gtggcatatt	tgtgaaggtg	gataaacatt	acaagaaaaa	85740
aaaaatatc	aagacattat	ttatttttgt	aggcaccgct	gttttagtat	gtacatcaaa	85800
ttcaaaacca	tcttccatta	catatatctc	aatctcttct	tcttctcctc	ctcctctttg	85860
tttggaacaaa	taactatcac	tacattttct	taaagctaga	caacatagag	tacaattata	85920
caccttttct	aaagcagcct	ttgtagactt	acaatcagaa	tacaatagtt	tatgggtcaat	85980
tagtatatgg	tcagggttag	ttatttctatc	ttcacatatac	caacaaaaaa	ctgtagggta	86040
cccatctctt	ctaccgctac	aatcataaca	agtcattgga	atacatccac	ctaattttat	86100

gttaggtgtc	ttacattttag	ggcatttttac	agtcttaatt	tcctgtcctt	ctttctcaac	86160
cttccattct	aatgtcctct	tttcatccac	agtgaacact	ggatccttta	ttgattcaga	86220
tgatcatgtt	tgacgtacaa	tatttacctg	tttaacaatt	tccatttttg	caccttggtt	86280
aggtctgata	cccataaagg	cacgcctatc	tacacaatga	aggacaaaag	aatgggctct	86340
atggaacaca	cattctggcc	gctccaacac	catttcccct	ataagattct	tgacaaacat	86400
tttcgcccac	aatcctaatt	cactctcatg	gttcaatttt	tcatagacat	aaaaataggt	86460
tgcaattaga	ggtatactca	cacctacaac	ttgttcaaaa	tctctatcat	caaaaccccc	86520
aaaaacactg	tttaagtaat	ggactttaac	cctattctga	aacctctccc	tggtgttgtg	86580
gattacagat	atgtcgttga	gaagcccctt	catattctct	ggcatacgat	cagtcgagtg	86640
ccagttggct	agcgttagaa	gaaccttgcc	ctccggagac	tctgggttcc	atcctcgaat	86700
cttcttttcg	ggagttcttt	ttagtataga	aacagcctgc	ctacaatttg	tcacctcttc	86760
atttgagggt	acaaaatttg	acgccaagaa	accgcaggac	aatctcatgg	gccatttatg	86820
gagtcgggga	ccagtatcat	atcttactag	ctcatcggtg	ggagggtcat	caaattcagc	86880
atcttctaca	tcctggaagt	aatagtcttc	cagttgttcg	ggaggagggt	acggcaatac	86940
tgaggagggt	acatccactg	ttacaatgtc	ttccatctca	ttaggctggt	cacatacatt	87000
gggtagtaaa	cactgggtac	agatcaggga	acatttgcta	tcaccagttt	ctccctccac	87060
catcttaaag	agtttaacgg	gcggtctgaa	tctattatcc	accacagtaa	attttgaatc	87120
cttgtctagt	gcaaagtctt	tgtccatctt	acacatctcc	atgaattcgg	cctgaagaag	87180
ttccacagta	tttggtacatt	tctctgtctg	cttgatgagt	tcggtgatga	gaagtttgtt	87240
ggctgcaatg	tattctgggt	cgacattttc	tctgtctaaa	atcgccctct	cgaataaaga	87300
tgaaaattcg	tgacatctac	ctataaaactg	taccatatac	tctccacaac	atgggcacct	87360
aaaaacgtcc	tttagttttt	cactaccagc	cgagaccttt	tcgtacacat	acattaggtg	87420
ttttatagta	caatcagggc	atagttttgc	agaacacgtt	tcttgtcgtg	cttcaaaagt	87480
gtccatgaaa	gcatgtacgg	ggaaataatc	gtaagaggct	ttcatgtttt	catgagaaca	87540
gttgaagaat	tttggtttca	tgctccaaatc	cgcgtagcac	aaccacatg	ttttattggt	87600
ggtattccca	ctcaatatct	ttgtaacgtg	tgctgtgatt	acctccactt	cgtcagatgg	87660
ttggtacacc	atcgccgctt	gactttctcc	ccaagactct	tcttgacgtg	tctggctaac	87720
catgcatttg	gcgattgctt	cttctagatg	catattttca	gcgttttcat	gttcgaggat	87780
gaaagatcct	agttttctgg	ctgaagggtat	gccgtgtcta	gataccaggg	acagtgggtg	87840
attttctaag	agcgaagcgt	tcggggagat	tattagacca	gaaggcgaca	ttacggattt	87900
ctttggtctc	tctactcttt	cagtatctgc	tgccaaaaga	tagggaacat	tgtagataga	87960
gtatctgtac	actatatcaa	tcactctggc	tatttttgtt	ccaaaaagaa	tatggtgtaa	88020
ttcttggggc	acatatccca	tagcgtcata	cacgggcctg	gcagcgtaca	tgcgaaagtg	88080
acccttattg	tagtggttgt	tggtggatgg	accacttaaa	aatgcttctg	ttacggagaa	88140
ggccatattt	tcccaaatcc	tgatcattgt	tcttccttca	tgcatatcag	aaccaaaata	88200
aacactaaac	gttctagcgt	ctcttatttt	tgccccact	tgcaaagcag	agaagggcca	88260
catgtaccac	tccttatgaa	acacatcctt	caaagtgttg	agagaaacta	ccacatcttc	88320
ataaatgaca	cttttcatgt	ggcgggtgct	cttgttctga	tctcgtttga	tggaacaag	88380
gagtaagaaa	atgcgtatca	aatccatata	tgatatcatc	tcggcgtacg	cctcacacaa	88440
cgcattcttc	tcctccactg	catcgccctg	atttccacgt	ataatttcat	ccaacatcaa	88500
gcgcgtattt	ttcatgacaa	acatgccact	ataaatacga	tgaattagat	ccttgtagtc	88560
tgccccatct	tggtttttgc	aactctttta	atgtccaatg	aattcttgtt	cgttttgggtc	88620
aagagttgta	aatggaactg	ggctgtcgtt	acttttctc	ttgatgttca	tgctgagggc	88680
tttcttcat	aatagagata	tctctttcaa	agaccgggtt	ggattaatca	caactgtttc	88740
tccctccaaa	agttcatccc	tataagaatt	gcggttgtag	atgtccagta	tgccctccag	88800
aagatcacca	ctttctccca	ctatacccac	aattcgttca	taggtggacc	tcttattatt	88860
tctgectccc	attaggtcgg	tgatcaagat	tgcaacttct	gggacagcag	ctgcaactat	88920
ggatgttaca	ccttccatgt	tgaacgaggg	aatgaatgag	ataaagtctg	gggcctccat	88980
cttatatacc	cttcagatgt	gaaaaaaaac	aacatgagga	aaaaagtaaa	aaattcaata	89040
tacatgtatg	tctttattgg	ctaggaagaa	cacatttcac	aagcaccagg	gttattgata	89100
gaacataaaa	gagcagcagc	aggatctgga	acaacaatag	aggacttctt	ctcctcttct	89160
tcttctcgga	caggagcaga	aaaagctgca	acaggagagg	gagcttccct	cttgacttct	89220
tgagtagacat	tcttgtagac	tgtgaactgg	acagctctag	ctgcgcctt	tgtgcgtaga	89280
taatagagag	tcttgatccc	cttctcccat	gcatacatag	tcattgaccg	caccttgctg	89340
agttcgggtt	cttccacaaa	caagttgagg	gattgagctt	ggtcaacaaa	catacctctc	89400
tgaatagcca	tgctccaaagt	agtacgagga	ttaatttccc	atacagtttt	gaatagttcc	89460
ttggtcgatt	tagggatatt	aggaagcgtc	tgaatagatc	caccacttgc	cataatcctc	89520
tgtttagtta	ctgaattcca	ttctcccagt	tttatgagct	ctctaataac	atattcggtc	89580
accacttgga	atgatcctga	aagtacatta	cgattataca	tggtggacgt	taaaggctca	89640
aaggattcag	agttgcccag	gatctgtgca	gtggatgcag	taggcatggg	agcaacaaac	89700
attgaattgt	gaacaccata	cttcataatg	tcccttctca	attgctccca	atcgtgaatt	89760

ggcaaagagt	tgaaatatat	gtccctat	ttaatat	ccttcccat	gtcaaattgg	89820
aaaatccctt	tgctcaaagg	actaccctca	aacagctcat	atgtttctcc	cttttctttg	89880
gcaatttcac	atgaagcttc	caaggcacca	tagtatatag	tttcaaaaat	cctcttggtta	89940
attagtgccg	cttcttcaga	ttcgaagggg	attctgagtt	tgaagaacaa	atctgctagt	90000
ccctgcacac	ccaatcccat	tggcctagtt	ttcatattgg	aaatgcgggt	cttgtcaact	90060
gcatagaaat	tgacatcaat	caccttgctg	agatttctgg	tcattgatttt	tacaaccctc	90120
ttcatctccc	ggtaatcaac	atagggcctt	aggggaaggga	tgggagaata	cttcacaaac	90180
ttgttgactg	cgatagaagc	caaattgcac	actgcagttt	cctccgaatc	actgtactgg	90240
acaatttcag	tgacacaaat	tgaagacttg	atgatgccga	cattttcttg	gttagacttt	90300
ctattgatgg	tatccttaaa	gcacacataa	ggtgttccag	tttcgatacg	tgagaatta	90360
atttggtcga	ataatgcacg	tgccctcacc	acctctttac	ctttgccttc	agcctcatat	90420
ttctcgtaca	acgccttaaa	ctcttcgcca	tggacgtcgg	aaaggccagg	gcactcgtgg	90480
gggcacatca	gggaccaatt	cttcccagcc	ttcactctct	ccatgaagag	atcagatacc	90540
cagatagctg	ggaaaagatc	cctcgtcctc	aaatcttcat	taccgcat	ctttctgcag	90600
tcaataaagt	ccttcacgtc	cagatgccaa	tcagaaatat	agatggctgc	agctcctctc	90660
ctcttgcttc	ctccctggct	aacctttttc	acagagacgt	taaagatttg	gaggaaacgcc	90720
atgagaccag	ggtgggtacc	actccatgac	gaaatggggc	ttccttttgc	cctcaaatca	90780
tgaaagtggg	tgccgagtc	tccagcagtc	ttggagatga	ttgccgcctc	cttaagagta	90840
tcataaatac	cctcaatgct	atcatcttga	agggccagaa	ggaagcacga	ggaaagtgtg	90900
ggtgtgactg	ttccacaatt	aaacagtgtg	ggggaagcat	gggtaaaata	gtgcctcgac	90960
atgagatcat	atgtttcaat	gacagatttg	atgtctgatc	cgtgaatgcc	gacagccaca	91020
cgcataatca	tgtcctgagg	gcgtcaacc	aagattctct	tctttctatc	agtgggggaa	91080
ccaatcttga	tcaataaaga	gtattctagc	gtcctcagtc	cgaacacagg	gaagagataa	91140
tccattttgt	aatcgataac	agcatcgaga	atttcagcat	tggccataac	attttcatag	91200
taggtatcat	taactactga	tgctggttta	ccagttccag	ggtggattgc	gtgcctcaat	91260
ttctgagttg	ttgcactaaa	actattccac	tctttggtgt	ttttgtggat	gttcgaacag	91320
atgaatcttc	ctgccagttt	tccaaaatca	gggtggtcaa	caatttttgt	ctttgcataa	91380
tcggccagaa	aatcgtccat	ttcttggaag	gagatggtag	cggaagacg	gtccatgatg	91440
tgagatgcaa	gttcttgagg	gttaattgcg	ttcttgtaaa	gcttgggcac	atactgggtg	91500
actggaagac	aggcattttc	aatcctcttg	attatctttt	caagactaat	ttcttgctta	91560
gtgcctatcc	tctttgagat	gaatgattgt	tgctggttag	aaccattttt	atgttatata	91620
attgggatgt	tgttatgttg	agtattttct	tatagctctt	ctcggctcga	ggaggtgaa	91680
agatgtgagt	gaagaggctt	ggacggtagc	tgtatttata	ccggcccggg	gaaggctcgt	91740
ggatattttt	gaaggagggg	aagaaatata	tagtattata	cgtagtcttt	tgatgtagaa	91800
agaaatcaga	aggtaggggtg	acagctgctg	ctgctgcagt	attagtagtg	cagggtgcaa	91860
actgttcttc	aaaaactttt	taaaaatatt	tctggatcac	tcgagtttag	ggggtggacc	91920
gctgtctagg	cctgatgtca	agttccgagg	gtggaccgct	gggtcgaccc	aatgtcagat	91980
tgaccagaaa	ccgactgttg	ctccagaaat	gtgcattaac	ctttgtgtgt	ttctggaaca	92040
gacgtttctg	ggcatagctg	cgcccagaaa	gggaagggtgc	aacatactgt	tttcgctata	92100
gaattttact	cttctcact	ctcacaaaat	tttgaaaaat	ttttctgggt	cactccagtt	92160
taggggggtg	accgtgact	aggcctgatg	tcaagttcgg	agggtggacc	gctgggtcgg	92220
gccaatgtca	gattgcacca	gaaacgactg	ttgctccaga	aacgtacatt	aacctttgcg	92280
tgttttctga	acaggcgttt	ctgggcatag	ctgcgccag	aaagggaagg	ctgtatctta	92340
ctgttttcgc	tagagaattt	tactctttct	ccctctcaca	aaattttgaa	aaatttttct	92400
gggtcactcc	agttagggg	gtggaccgct	gggtcgaccc	aatgtcaagt	tcggagggtg	92460
gaccgctggg	tcgggccaat	gtcagattgc	accagaaacg	gaatagctcc	agaaatgtgc	92520
attaactttt	gtgtgtttct	ggacaagtcg	tttctggtct	aggaggcaac	tagaaatata	92580
agcttgtagc	ctagaattta	gtacaccaag	gataaagaaa	tataacaaat	accatactat	92640
gttttatattg	agtaatatag	tatccaagtt	aaaataacaa	tcacgcactt	gtacattaat	92700
agttctgtaaa	agatgggcaa	acgtacacct	gagagtattg	tcccgacaat	cgtacatgaa	92760
ccctctagtg	cacgtatcac	gttttcgccc	tattaccatt	gatgcacaaa	tttctctctt	92820
catttctaata	gaggcagatt	gtttgtcaaa	ataacactcc	ctatagtaac	aaccaggatt	92880
tccattggat	tgacactgta	gttggttcgaa	cggttttctt	gtataacatt	tcccagctgc	92940
gtggtagtga	cgacacaaac	tcattgcaaga	atgtgcgtgg	gtagtttcat	ttctaagaat	93000
ctcccagca	ctagaggcac	agaaaaaatc	aactgctgcg	tggcagtgac	gcacggccac	93060
acacccgcac	tcttcacacc	ataaaaaggac	atgatctgtg	ttagtctgca	catctctcag	93120
aaacccccat	gtgcattgac	gtcatgggga	attgctattg	caccacctta	tgggtgtataa	93180
aagtggccct	gggtggcatc	ggttagtaga	cagaaacaaa	ccgtcaagat	gggtgctgct	93240
attaccacc	tctctctgtt	gttcgtcgtg	gctgtagtag	cttccgtcgt	ttttacaact	93300
gaaggagcta	gtgtgagagt	gaaacggtgt	gctgttagcc	cgtgccccga	cgttattgac	93360
cccgaccacc	gctgccaagg	gcgactgtgc	cgcaggctca	ctcgaggagg	tgacgacgac	93420

gacgacgatg	acgatggagg	aactttcgat	acagtagggg	ctggtatact	tggacgcaaa	93480
aagcgtgccg	cacctccacc	tgaggatgaa	gaagaggatg	atcttctaccg	caaaaagcgt	93540
gccgcacctc	cacctgagga	tgaagaagag	gatgatttct	accgcaaaaa	gcgtgccgca	93600
cctccacctg	aggatgaaga	agaggatgag	ttctaccgca	aaaagcgtgc	cgcacctcca	93660
cctgaggatg	aagaagagga	tgagttctac	cgcaaaaagc	gtgccgcacc	tccacctgag	93720
gatgaagaag	aggatgagtt	ctaccgcaaa	aagcgtgccg	cacctccacc	tgaggatgaa	93780
gaagaggatg	agttctaccg	caaaaagcgt	gccgcacctc	cacctgagga	tgaagaagag	93840
gatgagttct	accgcaaaaa	gcgtgccgca	cctccacctg	aggatgaaga	agaggatgag	93900
ttctaccgca	aaaagcgtgc	cgcacctcca	cctgaggatg	aagaagagga	tgatttctac	93960
cgcaaaaagc	gtgccgcacc	tccacctgag	gatgaagaag	aggatgattt	ctaccgcaaa	94020
aagcgtgccg	cacctccacc	tgaggatgaa	gaagaggatg	atcttctaccg	caaaaagcgt	94080
gccgcacctc	cacctgagga	tgaagaagag	gatgatttct	accgcaaaaa	gcgttaaact	94140
acgcacgaaa	agtgacgttg	ttgaagaata	gactaatatt	gttgatatgt	taaccctttt	94200
ttttcatgaa	atgtgtacac	acctgtcata	tatacgtgca	tatttgaata	aggaataaag	94260
tttatctgca	tctgtatttt	tttattagta	tcctttttgt	gggataaata	atcggatttt	94320
gtgtccaaag	atagtgtgac	catgatgcca	tatacaaagc	acgtgatact	ttccaagaag	94380
cagagtcgta	tgaccattga	cgtcaatgag	tgggcagagg	cggaggtggt	gataaagcgt	94440
ttctgagaaa	cattgggcgt	atgacgtcaa	ctacattatt	cttcctcctc	ctcctcctat	94500
tgccctctgc	agttcagtat	tttatttttc	ttcctataca	ataaaaagta	tcagatgaat	94560
atctttactg	ttttctgtgt	catccctctt	tcctattgta	aaaaaaccaa	taactaacta	94620
atcatggata	acttgaaagg	ggaatttggt	gcgcttaaaa	cagacctcac	ccattacaaa	94680
acacagttgg	atagatctat	attgggtattt	gttgatgttg	ttggtagatt	atatgttata	94740
gtaaatagtg	aacaaacagc	taaaaaggaa	ggtctagcaa	ctagagtggc	aaagcaagcc	94800
acagagatac	aacaattcaa	ggacgaaata	aacaacaaat	ataatgctct	aacaaatact	94860
ttggatgata	tcattctacat	ttttgatcat	ggagggagtt	tcaaaaagagc	aaaacataag	94920
gccataattg	aagcgaggga	atactctaaa	ccgctgaggg	aattagagtg	catgtttacg	94980
cgtatagcgg	acatgttaac	cttgactttt	atgactgtgt	acaccaatat	cattactgaa	95040
tttagacact	ctagtgaaca	agccactaat	agtataaatg	tcaccctcgg	acgtcttttc	95100
ttgtgtgacg	acttgtgcaa	tcaattacca	aaagaagagg	aagaagagga	agatttgaaa	95160
cagaaattca	ttactttcca	tgcgaaccta	tacatgctgg	acacacgcct	aaagaaagat	95220
ttgataattt	tcaaagatgt	catacaacaa	cttcacgtga	ttttgcaaaa	ggatacctat	95280
gctgtaaaag	aaggtgtggc	cattagatgt	gcgaaacaga	tgaacgaaat	aagtcaatac	95340
agggacaacc	tcaaggataa	ttacaataca	ttttcaaaca	ttttgaatga	aattgtctac	95400
atctttgatc	acgggggaca	ttttgaagaa	gtaaaacaca	aagccataac	tctgactaga	95460
aattacttga	aaacactcat	gggattaaaa	tgcatgttca	aacgcataatc	cgaaatgttg	95520
tcattgactt	ttctaacagt	gtacactaat	gttatagcag	aatttataaa	cgctagcaat	95580
atcttctgata	gagagatcaa	taattatctt	gtccaacttg	taacatgtaa	cgaattgtgc	95640
aaccaactcc	ccaaacctaa	acaataccgt	cccctcagtt	tgaatagataa	catagcttat	95700
ttttctcttt	ctgtccaaaa	acatctgagt	gggtttcttt	agtatgtgga	gtattattgt	95760
cttgaagctc	ataagtattc	aacctctcct	actggttaaca	tctcttcctc	tctataatcc	95820
caatatggat	agttgttgcc	tgatatcgag	gataacacca	gaactggctg	gcaagttaac	95880
ctggatcttc	ataccagaaa	acaacttcaa	gattgtccag	aactcactcc	cagacgacca	95940
agttatctcc	caattcagat	atctcgacca	tagacattgc	tatacgttta	tggagatttt	96000
gatggcaaac	attaaaaatc	aagacaggaa	acaaaacacc	acagccatat	gtgaattgac	96060
aactggaaga	gaaggacttt	tatgtagaag	aaccatacct	gtatttttgg	gttcagagga	96120
aaaacgagaa	gagttattgg	ggaatctccc	tgaagggtga	gaaattttca	ggcctagaga	96180
agttatgcaa	gtaattggta	ctctcttgga	caagaaacta	gaaattgacg	acggtatagc	96240
ttctgtaaag	gctgccctct	gtgctgggtc	atcatcgtaa	tacctaatca	tgagccacat	96300
agtgaataatg	accttttctg	ctatcacaaa	catgaaggat	ataaacgaag	aatatttctg	96360
agactttata	tttcgtcata	aacaattcct	caaccctgaa	ttcttcaagc	accttatatc	96420
tttgctcaag	aattccagga	aggaacatgt	tgcccatcta	gtaagacgtc	tagaacactt	96480
tctcatgcta	tgaccctttt	ccaagatgag	gttcacagaa	atggaagaaa	actacttccc	96540
aatctccagc	gatagtgatt	acggcatctg	tgaaaaatgt	gcacgaaaaa	ctcccaataa	96600
caagctccgt	atcttttaggg	aacgaaaatg	ctgcatagaa	tggtgccgct	tttatcacca	96660
acaaccgcct	ccggagggtg	ataattggga	tggaaaaata	acccaacaat	ccaataaagg	96720
ctacattaat	gcaggcgatg	aaattatcgg	catgctaaac	tcaaatgata	agggaaaaac	96780
attccctcct	atacctaaga	tggttgtacg	aagagtgggt	gacggtgtct	acgggcaagg	96840
aactatcctg	tcaaagattt	tgaagttcag	gcaggcaaat	atcccccacgt	gtctattcgt	96900
gacatgcaat	aaatgcaata	ggattttcag	gctcactatc	ttagggccta	caagaaacat	96960
cctttgcccc	ccttgagaaa	agaaaagtgt	tgagtaaat	acacaacaga	aaggagaaaa	97020
taaaccttcg	tttgtgcaaa	aaggaaacaa	acgtctacga	gtggataccg	gtagcaacaa	97080

gaacacgtta	gaaaaattct	gttcctggga	aagattcaat	actgaagttt	tgctcccttg	97140
gcttggtac	actattgagt	ctaagtggca	gaactgggaa	tcttttctgg	gttattcgag	97200
taccagatat	aaggaaactgt	gggcctttgt	gaacaaacag	gaaatatctt	ccatgaaaga	97260
ctcctacata	aaaattgaag	acatcgacca	gttattgagg	agtatcttgc	aagaccagaa	97320
gggtgtat	gagaccgtct	gcaaaataaa	gagcagagat	ggtttgtgaa	ttggccacac	97380
tgattccgat	accgactaaa	aaggctgatt	gatggcaacc	ccccccctc	cagactcagc	97440
cgcatgagta	taaatatggc	cacttctcac	accacagcat	cattccctcg	tcatcggtcc	97500
taccgtcaac	ttccattatt	actccaataa	taccaacaac	cccagaaatg	gagtcaatca	97560
aactgttcac	cgttgctggt	ctgaatatgg	agcaagccaa	ccaagtggct	gaagaaatca	97620
agtcagaata	taaaaccgag	gaggaaaaga	ggattgcccc	ggaagtgttt	gacaaattca	97680
ccaaaaaact	cattatgcaa	gtagatacgt	ctaaacactt	acttacaaga	gaaaacccca	97740
accgttttgt	atccccgccc	attgtccatg	aagatctctg	ggaaatgtac	aaaaagagg	97800
ttgcctgttt	ttggacattg	gaagagattg	atttcgaaag	ggatcctaaa	gattgggaga	97860
aactcactca	agatgagaag	gatttcattc	tccagattct	ggcgttcttt	gcactcctcg	97920
acggaattgt	aattgaaaat	cttacaacac	gtcttcgtca	agtggcgag	attccagaag	97980
cgaggagttt	ctttgacttc	caagttggaa	tggagagtat	tcattggcaac	gtctacggag	98040
aactgattga	tagactggtg	cccagcgaaa	aagacaaggc	tatcttgttt	aacgctgcac	98100
aacacttccc	cgccatcaag	aagaaggagc	agtgggctat	taattggatg	caaagcaata	98160
acgatttggc	ggaactaatt	gttgcccttg	ctgcagttga	aggaatcttc	tttagtggtg	98220
acttcgcatac	cattttctgg	atcaagaaca	ggggattttt	gcctggtctc	acctcctcca	98280
atgagttcat	ttctagggac	gaaggctctc	atcgcgactt	tgcatgcatg	ctgttgaaaa	98340
agggttttgt	tgatacccca	tcaagagaaa	ggattcctga	aattgtcact	gaagccgtcc	98400
gaattgaaca	agaatttctc	acagtttccc	tgctgtttaa	attagtggga	atgaactgca	98460
agttgatgag	ccagtacatt	gaatttgtgg	cagataaact	attggttgaa	atgggactag	98520
aaaagcacta	taatgttacc	aacccttccc	cattcatgga	caatatttcc	ctcgagaata	98580
agaccaactt	ttttgaaaag	agagtcgccc	agtatcaacg	tgcccaggtc	atggcttcta	98640
tcaataagat	caagaaggac	caacaaaccc	aagaaactgg	ttctcctctc	ccaattctga	98700
ctgcacctcc	tccagtctct	tcctcatcat	ccgaacaaga	agatgttgaa	gacggcgctg	98760
gggactacat	cagttatgac	gatttttagt	tccactattg	tgtcaatagg	ttgtgtattg	98820
tattattatt	gttataatat	ttttaaaaaa	taaatgttct	ataagactaa	aacaatgaat	98880
ttacttccaa	tattcctgac	aacctttttt	gttgcggtag	atgcatgctc	ttgctctacc	98940
atctgccttt	tacctgatgg	gaagaaacaa	cccttggttt	ttgattctgt	attagaagag	99000
gtggtatacc	ctacagatgt	gtgtgggcca	aaggagctg	gcgaattatt	cactgggtgtg	99060
gatcttttga	ccctctgtat	aggaggtaaa	aacaatggag	gtgaatggtc	aggaaaaggt	99120
ccttgtccaa	ggatcaataa	cgctgtcggt	gaacgagatt	actcccttga	cgaggaggat	99180
tgtaaagggt	ttagaaaagg	gttccgaatt	cctggcactg	accattttca	tactgtcttt	99240
tccttttgtt	gggtagacag	agatatgcac	gccaagtggg	tgcgcaacaa	aataaacctc	99300
ggtagatgaa	ctgatgatga	agatttggta	gattctggtg	ttaggactaa	attttaaatac	99360
tcttctaaaa	tttttggtaa	aggattcaat	ccgagacctc	tttactccct	cgactatcaa	99420
gagaggatta	agatattaaa	gtctcatttt	aacaagagga	cgggtaattt	ctttgctcga	99480
ggccacttgg	ctccggctgg	agattttttc	ctcgcttcag	agagatgggc	aacttttgct	99540
ctagagaatg	cagtacctca	aatacagaac	cataacaatg	gtgaatggaa	agatattgaa	99600
aatcggtcaa	gaactacgcc	aggtgccgcg	tgggctgaga	ctggaccaat	atttttacca	99660
cacaagaaga	aggaatatct	agacaagaag	aagaagtaca	tccctatccc	tcattgcccc	99720
tacaagattg	tgtacgacaa	gaataacaag	gaattgttcc	gtgtacagag	tgatatgtct	99780
tggaataaaa	atacataaatt	aaagaattta	tattgtttta	ttttgtcatt	tatttgatac	99840
atgtgttgta	tgttttaaag	acaatacaga	taattttcct	ccatgacgaa	acactgggtga	99900
tatgtctgga	gctctgatga	atgtcttgcc	agattgccatc	ctagtttttc	tcctggggaa	99960
ggtgacgtcc	ggttgagaga	gggttcgctg	ggtttcaact	gcagccaaga	aaatatccct	100020
ttgtccagtg	acggttaaatt	gtgtaccgtt	attagtgtg	atgacattat	ccctctctga	100080
ttgtttcaaa	gcttcataat	cttccctctc	atcttcatag	tcattctgcaa	cattctcagt	100140
gtctaataga	acaataacag	agttggggga	aaaatcagtc	gtgctacgtc	cagactggcc	100200
agtattttta	ctgctccatg	gtgtaggatc	atgctttcta	ggcttgtctg	aatgtagacc	100260
attatagttg	gctctcccca	tcatatcata	cagtgtacac	actagtgtat	taccaatgcg	100320
ttttccactc	ttattgttat	cacaataatc	ctcatcttct	ccaacaagag	ttgagtacac	100380
actggaatct	tttagaattg	tatgagaaac	taatgcctct	ttaaaaatat	cgctactctc	100440
ttctaaccag	aaatctgata	cactatcatt	acattttatt	gcagtattat	caataaatga	100500
attgagtaaa	gggtgtaaaag	gttccacgcc	aaataaagg	ataggcacia	actttgcctc	100560
atccgtgcga	ggtaaaaatg	gcctgtcttc	gttgatgat	tttgaagagg	ttgttgcaag	100620
aacacaattt	cttgcatttt	ttaatgcctc	agctgatata	cgtagacgta	tactgtttta	100680
cttttgcctc	gttgtctggt	tattaaatcc	tccacacaac	gagtacatgg	cattatcgat	100740



attctccctc	gcatgatcct	ctatgaccaa	accagccttg	gtcattagaa	aatgggtctgg	100800
gtctttaccg	agaggaagaa	tatctgcatt	gaattttgaa	attatatcat	tgacaacacg	100860
ttcacagtgc	acagatctct	ttatgaattt	agaggctaga	gatatgaaat	gtctatttaa	100920
attggaacct	agcctattcc	aaggaagtga	attttgatgt	cttttattat	ccctctcgtc	100980
agaagggaac	aaaaattgaa	gtaatctggg	ccaattaacc	gcagctgcag	tttctctctg	101040
gacgaatggt	tgacgttggt	ttagtagctg	aagagacact	tgggttggct	tgctactact	101100
agctggaaga	gggtgttgaa	agccacagac	gccaaatctg	aacgtcatct	ttagattggt	101160
gtgtagagat	tttgtgtatt	cctcttcgtg	gatttttctt	ctcctttcat	tgggcacaaa	101220
ctcctttgtc	tttaattctt	ccaagaagtc	ttgtacattg	tcctcattcg	cgaacgttac	101280
cttcccatct	tgccctcgtt	tcatcacgtc	gttggttctta	aacaggcgcg	cagaaagctg	101340
catcagggac	atttcttcca	actttttagg	gtcttcatgg	atgtccttct	tcctcttccc	101400
cgaagagata	aaagacccta	taacattctc	aatgcaatga	actgcatact	gtctcaattt	101460
tctgtttgtc	atccctgaac	caaagcctat	tactggaaca	accatgccgc	acttgtgggt	101520
gtatgtgagc	ccacaagcaa	ctgtcaattt	cttcagaagg	atctcgtatt	tttcaacttc	101580
attaacatcg	ttcgtaaaac	tctgtttata	cttgtgagca	acccagttca	ctataaataa	101640
caaggcataa	gaagcagaca	cctttcgtcc	caaaagttta	gaaatttgaa	gggagagcca	101700
gtctgccatg	tagccatctg	attcgtgttc	ggcगतaggt	gtcctcatca	ttgtgacgga	101760
tgctttctcc	actctatctg	ctacaaaattt	cactgcttta	acaatacttt	ttctgcacgc	101820
atttttgtca	ttagagttta	ttcttgcata	tggagtttca	caggggtaat	attcttcccc	101880
gtcattatct	tcatttggag	atgaattttt	agttttgttg	tcgttcttta	tatactgttt	101940
caattttgag	aagggagtat	ccagtacgtt	ttctctacat	gcactagccg	cagaaagagt	102000
gaaaccgagc	aggtaaagtt	gtacacatga	aaaggcacct	ccaaaaatat	taccaatgaa	102060
ataagcaaat	attaatcccc	tgatgtgggt	gctagggaa	ctaaagtgtg	gctccagact	102120
ataattcggt	tcaacgttaa	agtacctttc	caatctacga	ggcactttta	tgtttatgtc	102180
tgggaagatt	tcaaaattct	cactaaacat	accgcacaac	ttgtttgatt	ttcccaatac	102240
aatatctgac	cttatgtatt	tttcataaaa	gtcctcgtta	gtcatcgtta	aatcagttgg	102300
gggctttttt	gcatttttaa	gagtatccga	aagatgcacc	aaaccagttc	tgtagttgta	102360
gtttgccatt	gcttcatcgg	gcaataattt	gctcacttca	ttgtatgcat	cgacaacttt	102420
ttctggagca	attttttcag	catataaacg	ttgccatatt	ttcttatcag	gatctagtag	102480
ttcaacgtgt	ctagattcta	ttgtcttcac	atcgacaaga	aagtatcctt	cacgtatact	102540
ggtgcaggcc	aatctctcca	tcttcttggt	gtatagtctt	atcctcttcc	tgaagcaaga	102600
tatttgagaa	ccaactccat	ccaacatgtg	gtacagggtc	gattgggtac	accactcgtc	102660
actatttact	ccatcacgag	cagtgaagaa	atcttgaagg	aaactgtata	tagagatgaa	102720
cgaaaacagt	cttctggatg	atgttttcag	tctcatgtca	gttctctgca	taagtttctc	102780
gtgccgtata	actctgtcta	cgaattccca	tgtcagggtt	tcattttacgt	attcttttag	102840
gagtgccttt	tctgcttcta	tagttgtagt	agaagttgaa	tccataatgt	aggaatgagg	102900
gaggtacttt	ggcacgcacg	tgtgcactga	ccgagacaca	acgggtgtact	gaacaagggg	102960
taaaagcgtt	ggctgtttta	cacctctcag	aggaatccct	ctaccagaat	aagtcctttc	103020
atttttttaa	ttaacacacg	caaaactgac	gctgaaatcg	tttcgcaata	atgggagagg	103080
aagtgggagg	agaactttcg	cctgtggctg	tagggatact	ttcgggtggtg	ttaaccgcca	103140
taattatctc	tactatattt	gccatctact	acttttattt	ccgtccaaag	gaaggggtta	103200
agaaatcgcg	agtcagtaaa	gacccttggg	ctatacgcgt	agatgctaac	catgtcctct	103260
ccaataatcc	tcctacatg	atgttcaata	caaacattaa	ggctagaaat	acactaacag	103320
aatttgatcc	caaaaatatg	aatgaagagg	aacgagcaga	atttttcaag	atccattatt	103380
ttactgggtt	ccctaaagat	gtggaaaagg	aacaggtgca	gaagaagaag	gaggaagaag	103440
aagaagacga	agaggaacag	acgacagata	ctaaccctaa	aaataagaaa	gtggaatatg	103500
taatgctcga	atctctgaga	ggggataagg	ctggattttt	gatagatgag	aataagacca	103560
tgtctataca	aggttctcct	ggtacaaaaa	ctgtctgtaa	gaaaacgacc	ctaccaaagt	103620
ttgtcccaac	ccctaaaaacg	gaaaagtatg	ttcctttcaga	tgaagatttt	ttcaggatgg	103680
aagaaggaac	aggaagaaaag	gcagaacatt	attccttcac	gtctgttaag	acaggaagaa	103740
ccttaatcat	gggtctctgt	ggctaccctg	tgatgaagga	tataagcaaa	ggtacaagcc	103800
aacagtacat	gtacacattt	gaaccaataa	aggaaaaaaa	gtaatgtctt	tgtttatattc	103860
cccctttttt	agaaaaattg	gaacaacaac	aatgtcgttg	gctgtgacag	aagattacgg	103920
gcacaatgaa	aagttgatca	aacggttaca	aacctctgta	tatcacaccc	ctctattagg	103980
tgacagaccat	gtaatgaaat	ccatatcaga	ctacataatt	tctcgtcgat	tcatgaaacta	104040
cacaaatttta	ttaaaacaag	ttgaatatgt	tttcgatgaa	gaaacaggag	cagttatagc	104100
taatatctgt	ctgttaaaaa	tcctagaaaag	atgctgcacag	aaaggaggaa	tatatgatgc	104160
accagaagat	gttgcatctt	tcaattctaa	gatgggggaa	gtaacgcgcc	tatttactat	104220
tataggagggt	aggcccaata	tgacgggtcg	ggttaatttt	aaacatgggc	agacaaataa	104280
tcctgcctat	ggttatctca	cagatgataa	tgatactact	actgttactc	ctcctgttac	104340
tcctcctcca	tctccagctg	caagaagatc	cccttttttc	acacgcactc	tcatatccga	104400

gtcgtcttca	gttgaccatt	atgtattgat	gcatgataac	ccaaaaagat	cttcatttaa	104460
ggtgtatgat	attcacgcag	aaacctttcc	ccataaagct	ccttctgttc	ctaccttccc	104520
ccctaaaacc	tcgtttgaaa	tttctgacgt	gactctcgat	tggtcaatgg	agattttttc	104580
acgagacagg	gatgttttag	acaatgttca	cgactatatt	gctaacgacc	ccgtaccatt	104640
tttagtggtg	gttggtgcacc	gtggatctag	tctccgttga	gtaagtactt	tagttgcagc	104700
cgggtctcatt	agacctgaaa	aatacccttc	atttgttaga	aaagtgtgct	tagatcaaaa	104760
tggcatccac	ttcttcatca	actaagaaaa	gagtacatga	agaagatgaa	aatctcatcc	104820
cacaacccaa	aaagaaaaaa	tcaaagaaaag	tactaccatt	tcctgttgac	aagtatagag	104880
ctgtggataa	aaaggtggta	aatctcatac	acaagatatt	agatcaagaa	aaggaccacc	104940
tttctagtac	cgaactgcaa	atgataactg	aatgtaatgg	tgcgcgagaa	gatctgctta	105000
aacatcttct	agacgaagga	gaattttaacc	ctactataat	tgaagtagta	tcatccatgc	105060
ctattgaaac	aatatacgaa	atactctctt	cttctgctga	cgacaagaag	tttgtagaca	105120
tatcattatc	aatgttgatc	cacatacttt	tcttcgctga	taagggtact	atgtgggtat	105180
ccaacgcgtg	cgttcaaaat	gttttgggga	acgactataa	agtggaaatt	gaaaatatac	105240
gtaaaaagta	tctgatattg	gaagacttac	tgaacggcgt	ttcaaatacat	tggtctgaac	105300
atggctcctc	ttctcacatg	ctccattctt	caatccctat	tgtacaagac	atgttattga	105360
acaggctggt	gcgttacttt	agcacgtatg	atggagatgc	tcaattcgat	atatcattca	105420
taattaatag	tgtcttgtgg	ggaattgata	aaagtgttct	caacgaattg	acacaattga	105480
tatcgagggg	gtttttcatt	gtgtcgtacg	taccgatgcg	tgtacgaaca	ccttcaaagg	105540
acagtaattc	gccacaaaat	actccttcac	aaaatatgtc	agcactaggt	atgaaactca	105600
atacattttc	atccagaatc	tcagtgtaca	gaaacaatac	ctttaaaaaa	ctaaccgagt	105660
tagtgcataa	ctttgattac	ggttccaaag	atgcatcatc	atcatctcct	cctcctcctt	105720
cattatcgga	cagcgtcaac	acttttgtga	ggttgtacac	caactatgac	atattcttaa	105780
aggtgatttc	cgactggaaa	atgccttatg	ggttctttta	gaaaactttt	gacgtccttt	105840
attctaaggg	gttgatgaca	ttatcagtgt	ctgaatatat	actcaaaaaa	gagtgtggtt	105900
cgtttttgcg	gccttgaag	gaaagggaaa	ttttaatcta	taaaatggag	aagagagaca	105960
ttatatgtat	actgaaaaag	tctttgttcg	gatttaattt	caggtgttta	aaacaattac	106020
tcctctctct	caaacacttt	ttaaaaattg	aagaggttaa	acatatagca	cgttttgtct	106080
ttagagatta	cagtctcatg	tgcaaaaactc	aaaaagattt	gcagagtttc	cctgccatac	106140
agtctgcttc	acttttcatg	gaagaattcc	cttggcttgc	aaaaacttgg	atcgacgacg	106200
atgatgatga	aggaggaag	ggacataccc	tattaacatt	tgctatagtg	cacagatatc	106260
cttctaaggg	ccaacttatt	tcacacccaa	ttttaaatac	gttagtgaat	actacatgta	106320
gagacaagca	ctttactccc	ctcatgcacc	tcgccaacac	gtctataatg	taccaatgca	106380
atacactctt	gtgccttata	ataaatggag	ctaaaccaga	gttcataaac	aagttcaacg	106440
agaatgtttt	gcatatagcg	attgaaaatg	ttaactatgg	agtcatcact	gaattgagag	106500
gaacattatc	cagcgaacaa	attgaaaaaa	tggtcaatgt	aagaagaatg	atggataata	106560
caacaccttt	aatgatcgcc	ttggcgaggg	agaattttgt	actcgctcag	ctttttgacg	106620
gtcttttaca	gccccaaaata	aaggtccgtt	tcggttcttc	aaagaggcta	aggataccag	106680
agtttgtcct	cttaaagggc	ctaaaggaat	cagttgcata	tttggaacg	aggaatata	106740
cctacgatat	taacatcata	aaggatgcag	taatggacaa	cagtcttttt	gaagaggagt	106800
acgaaatagc	agcagcagga	ctgcgagggc	ataactgcga	ccctgaagca	gacgagaaga	106860
ctatgaacac	gtggaacttt	ttcaccaaaa	attcaaccaa	atgggcaagc	tctattttcc	106920
aaaagaatag	gcagaaattt	gtaaagattg	tggaatggat	gaataggaca	tatgaagact	106980
ctgaatgtgc	aatatgcttg	gatagtctgg	acggggatct	tccttcaggg	agaacaactg	107040
gcggctcattg	cttcacacac	gtctgttggg	tatccttgat	aaggatgagc	gggccgaata	107100
atggcagccg	cgcaagagga	ggaggaataa	aatgcccgtc	ctgcagacaa	gtcacctgcc	107160
tcggaaaaag	actaggggtt	gccgactatg	atattgaaac	agaggaagaa	cgtagacacg	107220
aaaatgtcgt	gccttcggta	gaagaaggaa	gaagggaatg	gaggaagatt	ggtgttgaca	107280
aatatgaatt	tcttgtaggt	ggagtgtgga	caaattgaaat	aaaactataa	aatgaactag	107340
aatatttggt	tattttttac	accttacaca	tggtccagaa	acgtctgttc	cagaaatgtg	107400
ttttgagatt	tctggacaag	ccatttctgg	agtaatctga	cattgggtcg	acccagcggg	107460
ccacctctcg	aacttgacat	tggttcgacc	gagcgggtcca	ccctctaaac	tcgagcgacc	107520
cagaaaaatt	tttaaaaaat	ttttgagatg	gagaatgagt	aaaatctctt	ccctgaaagg	107580
gaggtctgaa	gaggctatga	cggttctagg	tgccccccct	ctccagaaac	gtctgttcca	107640
gaaatgtggt	ttgagatttc	tggacactcc	atcttctggag	taatctgaca	ttgggtcgac	107700
ccagcggctc	accctcgga	cttgacatca	ggccgaccca	gcgggtccacc	ctctaaactc	107760
gagtgaacca	gaaaaatttt	taaaaatttt	ttgagatgga	gaatgagtaa	aatctcttcc	107820
ctgaaagggg	gatctgaaga	ggctataacc	gttctaggtg	cccacctctc	ccagaaacgt	107880
ctgttccaga	aacttactaa	agttaaagta	cgtttctgga	caagccattt	ctggagtaat	107940
ctgacattgg	gtcgacccag	cggtccaccc	tcggaacttg	acatcaggcc	gaccgagcgg	108000
tccacctctc	aaactcgagc	gacacagaaa	aattttttaa	aaatttttga	gatgtagaac	108060

gagtaaaaca	ctctagtggg	ttaggggtgtt	aacagcctac	cctttcttgg	cgcagctaga	108120
cccagaaaca	tctgttccag	aaacttaata	aagttaaagt	acgtttctgg	acaagccatt	108180
tctggagtaa	tctgacattg	ggtcgaccca	gcggtccacc	ctcggaaactt	gacatcaggc	108240
cgaccagag	gtccaccctc	taaactcgag	cgacacagaa	aaatttttta	aaaatttttg	108300
agatgtagaa	cgagtaaaac	tctctagtgg	attaggggtg	taacagccta	ccctttctgg	108360
gcgcagctat	acccagaaac	atctgttcca	gaaacttact	aaagttaaag	tacattttctg	108420
gagatgtgcg	cacgtatgca	tgcatgcata	cgtacctatc	tgtatttttt	taaaagtagg	108480
ggaaaatgct	atttaataaaa	acaaccacca	ttctccgctc	actatacagc	tgaccttcgt	108540
tgagtaacca	tgtctagcgg	aaaagtaacc	tacgaaatcg	ttgaaggggg	attgttgaaac	108600
aacaagtacc	ttctagatgg	aggtgcagca	atctgtctgc	agtctaattg	tgttgcaaga	108660
aaacgtcacg	ccggttccct	ccacgataac	ctcttcaaga	tgctaggatt	tggcgacccc	108720
tataaacaga	gacggggaaa	aacaaacagc	aaaaatctgg	ccataattga	agatagacct	108780
caactcgggt	cagtatcagt	tgccaacac	ccgacagaac	cagaaaggtt	ttgtccatg	108840
acattcttat	ttgctcagta	caatatgggt	aatggaagaa	aatgttactt	ccctaacgac	108900
aaagagtatg	ttgagagctg	caagaagcac	gaaaggggtc	acaaatcttc	cacagaaatg	108960
aaaagattgc	gcttgattta	ctttaacaag	tgtcttcacg	cgatcgccaa	atcacctgca	109020
atgaagaagt	acaacaagat	aatcttccct	gccagaattg	ggtgcgcggc	agctggagga	109080
gattggggaga	agtaccatgc	ttctattcga	gatttctcca	caatcattga	taaggaaagt	109140
ataatagtgt	ctcaaaaggt	gtaattaaaa	aataaaaaccg	tcgctggcaa	cccccgccac	109200
caccaccatc	gaggcgggta	taaataaggg	gcgctggcac	atgggtggga	cactcgcac	109260
atgtcttcca	accgattcag	tcagctgagg	ggcaacgagg	agatggttgg	ggactattca	109320
agatggacaa	ctgtcaagaa	caggaggaac	agacagcaac	agtattccca	tagtttccgt	109380
ccccaaaca	aacaacaaca	tcaaaaaaga	acatcaacca	attctcctcc	tgctccacct	109440
cctccatttc	ccatcattag	ttggggagcc	ctcggcagct	actcaatgta	tcgactggat	109500
gaccagtgcg	gaaattgcga	tgaaactggc	tattacaatt	tccactctta	tgatagaaag	109560
agggaaagag	ttcgctcatt	aaacaacact	ccaagtgaag	gcagtgtggc	gcgcacaagt	109620
agatcttccc	ccttccctaa	taagaagaag	gacgttgacg	aagctccacc	tcctcaatca	109680
aaccaacaca	tgtaccccct	caacaagtac	agtttccgtg	aatatactcc	ttcatcaaag	109740
cttgtgaatt	ggcgagaccc	ttcacaagaa	aaacaggaca	agatcttaca	agaggaaagaa	109800
gctcgcgccc	ctacaccac	tccccaaaga	aaggaaccag	aagtagaaac	taaagatgat	109860
gttgtcatcg	aggaagaaac	tgaccagaa	ccagaaccag	aaccagcccc	agttccagac	109920
ccagatattc	ccgcaataac	tgcaactact	cagttagaac	acgttcagac	acgttcagac	109980
gattcttcta	cagtatttct	cagaaatgtt	attctgagta	tcgtgttttg	gtttctgggt	110040
gtttattctg	cattatttgc	aaaatgtatt	agatctaaga	aggaataaat	aaaatgggtat	110100
atgaaattta	aatctttatt	gtttctttcc	aattactcca	ttgaaattgt	cctccttggt	110160
agtgcgcctt	ctggcaacac	tcccatgtcc	acaagtgtta	aaggttgtat	agttccatcc	110220
ctctttgggt	ggaattgtcc	tctatctgat	tgacaaacaa	aggggaatct	atccttcaaa	110280
tcaccctctg	aaacagaaac	agttttttct	ctgttataat	aatatctgct	cattaatcct	110340
tcatatccaa	aatggtgatg	gtgtgcaaat	ttccttagat	taggtcccc	tacgcttcta	110400
aagtagaggg	ttgaaagatc	atcaaatggt	tctgggcctt	taactcttac	cccctccaat	110460
gttgtttttg	ttccactaag	atctgaaggt	ctcatgaaat	ctgcataggt	tatttccaca	110520
cctcttgtac	aagcactctg	agcagctgta	ggtgcgcaag	attcgaatcc	tccatggtag	110580
ggtgtcaata	caggaagtac	atggactctt	ctcatgactc	tagggactct	tttactcgct	110640
tcatagaaac	cgaccatgtc	tttttgtcct	cctctacat	actttgatga	tgatgtgttt	110700
ctaacgcgga	gattttctgt	agcctttcct	tgcttattga	ttgtgaaaac	ttccgcatct	110760
tcttccaaat	ccacataatc	tgaaatagat	aatctcctct	tctttgtact	accggcagtg	110820
cttccctcta	acatttccat	attgctgtta	actacttcca	ccacaacttc	actcccatca	110880
gttggttcaa	tgcttgcgcc	ttcatattat	gtcgcagaat	cggccgatat	tgttggcgaa	110940
tctatgtctg	taagcaagg	cgttgcatat	aggctcacta	tatccttgac	accctcaacg	111000
tagggggaaa	atgttcccac	gttaaatgta	gaggcagtaa	ctccatgaga	agactcgaaa	111060
aagtccacta	tccttctagc	ctttgcaccc	tcttgacccg	tttttgctgc	atcccttata	111120
atgtggaaaa	tttcagcctc	cgcaggaggc	acgcccggca	agcgttcata	atcctccatt	111180
aaaatgtcat	tagatacaat	atctgtcata	ccaacatccc	ctaacaattc	tgcgttccta	111240
tcgaacgtac	ccttcccttc	gtccaaaaca	gcagcaggta	ccttttcttg	tcttgtggaa	111300
taaggagtgt	aagccgtact	cctacgcatg	gcacaaaatt	tattaggggc	caacataaca	111360
ttggaagata	tatcccatat	attttctggt	gcagctttta	ggtttatctt	tcttccatta	111420
gttttagttt	ctccgatagt	atttagtatt	ctagcgtctc	cggattgagc	tctcaggagt	111480
gctgcagaga	gatgaacatc	gttttttaggg	agggtagtca	tgaggggaaa	acgtgaatgc	111540
ctatttcctc	tgctaggtgt	tgccgctata	gggtcagttt	tgttcctacc	ccctccattc	111600
actttgggac	agaataaacc	gttgggtgcaa	ttacagttct	ccttttctcc	caattccccg	111660
attttatcga	atatgttttt	actattagga	tcttgcactc	caaaaatact	ccttttctcca	111720

atattggcag	gaagtagccg	tgtttgttcc	tctacataac	tctttataga	aaatttagat	111780
aacgaagaat	gtgattgcgg	gcccaggggt	ttggggacca	tcattgtagt	gtactgagag	111840
agggcaccgg	agcacgggta	tccgaaagat	tggccagttt	cttccctgac	acaaggcggg	111900
gagtacacgc	cgttcaagta	gtggccggcc	gtgtgggggc	tcagacccca	atctgctctg	111960
aaccgattag	ggatcaattc	tggcctaata	aacgtttcag	aggaaagagt	cctaaccctg	112020
agtagcgact	caaagagagc	cataggagga	gggatgaaat	tgagggtctc	ttcagtttcc	112080
ttgacttcac	attgttgcca	taattcatcc	ccttcattga	atttttagagg	gactattcca	112140
tgcatggacc	cgaccgtgcc	gttcgagact	gattccttga	cactcctttg	aatgagaaaa	112200
ctggaaggta	tgggtaaagg	aaatccccct	aaaactccca	aaaatgatgt	agcttgagca	112260
gccgcagaca	ctccgcagg	aggagcgaga	ggcttagaaa	agggtcgtgc	tggagcgtac	112320
gaattgaagg	aggttttaat	gtctgttgtc	gaatttagaa	tagctctaata	gtctcccttt	112380
gttactcgat	cataagtgtt	gttgatggct	gtcaagttgt	cggccgaacc	agggtctcct	112440
ctcgcgttga	ccggcgatct	gcgttcgaac	cagggtgtgt	cggggagaga	agatgcagga	112500
atttccatag	gtcttacaag	agggtgaagat	gcaccattca	ttaaaactcc	atctccagtg	112560
aggattgctc	ctgcaaaaat	atcgggcttt	tttgataacg	tttttgcgac	cctttcggcc	112620
tcgcgcatac	ccgtaccttc	tattccatta	tttagtcctc	ttcccagaaa	aaatgtccct	112680
tcattagaag	ctatgcgcca	cgcagttgga	gggtgagcaa	acatttcata	tgcttctttt	112740
tccccactt	tcttaaacac	tgcagatgaa	ccagccttgt	aatgatcaat	tattttggga	112800
gaatttgtat	acaatathtt	ctcactgaat	cttgcaagg	tggaaacttt	cttagcacc	112860
tgcgctgtaa	caggttgca	aataatacct	ccaatttctt	tgaatttggc	attgtttggg	112920
tcattgtata	ttgatcttgt	attgatgggc	aggccagacc	tctcttttcc	ttcgccgttc	112980
aagttgggga	aaaaatagtc	cagaagtaaa	tttgtaacgt	cgtcaaaact	attactagaa	113040
tttgtaacca	tcatagaatt	taatgtactg	ttcgcaaaaag	attggtctct	ttcttgtgcc	113100
gtcaaaagag	agtgttgtaa	aattgtctcg	atgggagtgt	gggccattcg	cttagcggta	113160
ggtctatagt	gtaccaaggg	caatatctta	tttactgttt	tatcattttt	agcagaagg	113220
ttttccttta	ttactctatg	gagtgaagga	acgacgtatg	ctggtgcgca	tatgccagag	113280
tcgtgagatt	ttctcagttt	ctgtaagggg	ttatctttgt	acgaatcgta	ccctgccttg	113340
tcagaatctt	taagggaagg	tgtttctatg	gtcgtatcgt	tgtgcgcac	ccttctgtca	113400
gtctttactc	ctgaaggatc	gcctgtctct	atgtgaaccg	tctcggggaa	gattttaccc	113460
tgggacgcta	ttatgcccac	agcatgatct	atgctatcga	ttcctaaacc	gggaatatgt	113520
ctatggggta	aaggcacgac	cctgagcgat	gcgtttggat	gttcagtaaa	atttccccct	113580
ccagctccaa	ccagcccatt	atcgtttagt	gcatttccgt	tccagatgtg	agcggccaca	113640
cttctgttcc	cactgtaggg	cactacacct	cctacagatt	cactgactgt	gagttttcct	113700
tgttcgtcag	aatcttcaat	tcttgagtgc	caattgccgg	cggcgtccat	ggcagattcg	113760
cgcaataatc	ctcccgtaat	cagatggcct	ccgttaaacc	ctgtaatttc	aggtgctctt	113820
ccaaaaagag	aagcggcata	agaatagccg	agagccgaca	tcctcgtatc	gtttcctggg	113880
ctagggaggc	acgcgtcctt	agtactacca	cctaaagttt	cgtacctttc	tgttatttgc	113940
agcaataaatt	ttgcaccctc	tacaaagggt	tgagcataat	ctgtttttgc	cgtactcggg	114000
agatctatac	cggccacttc	ttccagtctg	atttgtgtac	tttcatcaca	aagacagccc	114060
tttgttccag	tatctcctac	aaccccatat	ctgaacatga	cagggcagcc	tagaccttgt	114120
tccttttctc	gtataccacc	ttctttcttc	tcacattttg	gggcgttggt	ggcagggctc	114180
ctctgctggg	agtagccagg	ttcgcacaaa	caatccatag	tagaagtcat	actgcttatg	114240
tcgaaatcga	tatcgtccac	atcatcaata	attgagaatg	ttgtagggtg	tataggtcgc	114300
cccactcctt	ttctccaca	cagtacaata	tctgtgcacc	caagaatggg	ctctaactct	114360
ggatctttat	tgagaaggga	aggatccttt	cgcaccacag	acgaatctac	acaccctctt	114420
tttttggtga	tataagtctg	tccctttttt	cctcctccag	ttatgactcc	tccagattcg	114480
tagtgcaaat	aagcctcctc	gacagtagta	aaagggttga	cgtttctgta	ggctgcatct	114540
gtagcaacat	catcgtcgtg	cttgctgaac	gcagaagagg	ctgaaaaaat	agtatcggcg	114600
agagggacac	aaactccgtc	atattctcta	tcattctcta	taccgtattc	agttttcaat	114660
ctctactagg	atttgacgca	agttcctccc	ccgagagaa	gacagctaata	gcattcaaaa	114720
tcgttgccctc	ctacgcgaca	tttttttagga	gttttaaaac	agtcaaatgt	gttataatgg	114780
gaactaatth	cccctggtaa	tagagattct	acaaaacctt	tccttatgat	gtctgacttg	114840
actccagcca	taccgaaggg	ggcgtccgta	tcgacatata	aggggtcgaa	agggttggga	114900
ataattcccc	cattttcttt	taatcctttg	acgcgtaaaag	agtttcgaga	catggctcct	114960
gtatctacaa	aagagctcgc	ttaaccacag	tctgactcac	ccgggtacaa	taagacaaaa	115020
attataaatt	gggaagaccg	atacagctct	tcatgacaaa	ataccccgag	aacaaaagat	115080
tgttgtctag	gaacaaagaa	acattaaaaa	tggttgcccg	aagctccaag	accaaattccc	115140
gccgtggaag	caagaagagg	tccaccactg	ctggacgcac	ctccaagcgg	aggagcccat	115200
caatgaagaa	gcgtgcagga	aagaagagct	ccactgtccg	tcgcccgttc	tcaaagagcg	115260
gaaagaagtc	tggagcccg	aagtcaaggc	gttaattctt	ccctgtacaa	caactatgtt	115320
atthaattga	tttttttctt	tctgaataat	tggaaataat	aaaacatcca	ttgaaactta	115380

tgcagtattt	ttattcaatt	ttttaaccaa	ctataaatcc	acatgttgta	taaaagttaa	115440
agggtacaga	tatattataa	gatgatgtaa	cagatgcacg	gtcaataaca	acagggcctg	115500
aagaagtgtc	tatgaatttc	ttgtagaatt	cttccctgtc	tgtacttgac	gctacattgg	115560
caaataccag	agggtctact	agtacacctg	agctagtgcc	gggttctatt	ttagacatga	115620
cattttgagg	gattttaaca	cataatacaa	tatcatcatg	gtcgaatgtc	gtcctgttcc	115680
agagacggcg	atgtagtgtc	gaattttctat	ccactaaaac	tagaccatcg	tcattttttca	115740
aatgcttctt	tccttcattt	ctagctacaa	ttttcatgta	gaatcttact	ctttctgcat	115800
acgacaccac	cttgtcttga	ttcccaacta	tagcaaatag	taacgaggaa	gtaaattcat	115860
tgtttgcacc	attattattg	tagaaccctg	ttgcaactac	aattcctcca	catctagggt	115920
ctagacgtac	cagaaattgt	ccatcggtca	accgagtaac	agggtcgccg	ctaggccatg	115980
tggctagccg	agtctgtaga	ggggcaactg	gttgtctcaa	ttgagaataa	gaaccctactg	116040
cgcgtaggcg	gccagtgttt	ctccagttcg	tgtatctgtc	tgcaggttcg	tcaggggtatt	116100
tatttgctcc	aaaaacaaca	atacccccatt	ttcctaaaaat	agccgcaagt	ttcttgtctt	116160
ctttatttac	cagaagattt	tcctttttgg	ttccagactc	gtctaccacg	tatgtagtag	116220
ttgaagtgtg	cacaatttgg	tctaattgtt	cttcagaaac	gccgtctccc	atgtacattt	116280
tagcgtacac	tttctcccc	tgtgtatacg	cttcaactagg	tgtgtggcaat	aactgtcgat	116340
gacgttcttg	ttccttatcg	atttgttccc	tcaaccagtt	ttctattgaa	aattcagttt	116400
gagtatctgt	attgacaatg	tttgtagtat	cattcgttct	tatggaagaa	atgaaaatgt	116460
gccgagggtg	ctttatttct	cccccgtaat	cagcgaatgc	ccattcaggt	atgcttgtag	116520
gtagggggac	aagactagtc	tgtttcatga	aagggtccct	tatccctcta	ttagaaatgg	116580
gaggaagtgt	agtgcgacag	tagactatgc	ccttggttgg	tatgtcgggtg	gcgggtgtgt	116640
cccttacagg	tgccgtaaaag	gttgagggat	cattccatat	agccaattcg	ttagatggta	116700
cagacatgtc	tgaaaactgt	cottcaaaaat	gcccgcccat	cgtaaagggc	atctgtatgc	116760
ctttatcgtc	acctccaaat	acttccatct	ttacactgaa	aacctatcg	tctcgtgcac	116820
cgtcaataaa	tataggcgcg	ctgggtattc	tcgaagaaag	aacgttttct	tttgcaagta	116880
tagaaccaga	cacgggatcg	gagactgtga	tgtggtagct	tttatcttca	aggacaacat	116940
catcatcatc	atcattgacg	ataacatcag	atacgggtcaa	gacagtagtt	ttgttccttg	117000
acgtgatact	gtgaatgggt	tggaaatgggt	tatcactcgc	tttcaactagg	ccgttatgcg	117060
aatctaaaac	agggaaaaca	gcgtacagtt	tagtaggttc	tgcgggtgcc	ttaaatgtag	117120
gctgttcacc	tcccagtaat	gcagtttgaa	cgggggtaat	aatatctcca	cctcgtactt	117180
cagtcfaatg	accaactgaa	acgttttaaag	cacgaggcag	tagagatgtt	gtgcgttcac	117240
cggcatattc	tgtggcgggg	gaagaaagca	cagccgttat	tcgaggttct	ctattatcat	117300
tatcagtttt	caagatgata	catggtctta	gttggtagga	gaagaaatct	ggcccgttcg	117360
tgggtccagg	ccaatctggt	gcagttgcag	catctactct	aaagtttacg	ctagaaccga	117420
agcaccgcac	tctcgaaggt	gtattatgta	caacaacttt	gttcgtgtta	gcattcacat	117480
cagtacttat	aaccgagaac	aatttatcag	attgagtaac	ttttgatgct	ggaaaatacaa	117540
tattgtacc	agaagatgtg	gttaaaacgt	cagacgacgt	tttgaagccc	acaatccagc	117600
ccaacatttt	ccattgcgct	tctatttcac	tttcaggtag	agacacacat	ataaagggtcc	117660
gagctgggtt	agatggattt	ctaagggtgg	ttatctctgt	ggcgtttaga	atcttgtaac	117720
cctcggattc	atttccctcc	atattcttta	acgtttcatt	gtatagtact	ttgtttaata	117780
ctggtgtgtt	aacagtgttt	gttttcgagt	acacgaacga	cactgaaggt	ttgttaatat	117840
ctgaaagtgt	attttcgcga	ggtagtttag	ctgctaaatt	ggacgctatt	tcagcttgtc	117900
gggaaagacg	gggaaaatta	gcagggtaat	ctgaaacata	tttttcattc	aatgtatcag	117960
gagtgtattc	cacattatca	tagttttattg	ctttaggcat	atcaagcctc	atgagggcta	118020
catttctaca	agcaaaaact	tccgttattt	ttggtatggg	tgaagatatt	gttacctgag	118080
aatcgaataa	cacggtcttg	tttttatcct	ctgttacaat	ggaaattttc	agtctattcc	118140
cagtgttgaa	aatacttccc	tttggttgata	gtgttatacc	gtcagctaga	gaatttactt	118200
ccacgtgttt	gaatacggct	tgttgtttat	tgccattgtt	gcgagagaac	gcattcgggt	118260
cattggtgat	aggagccaa	cctgctggga	caaatttcagg	gaaagtttcg	aatagagacg	118320
gaccactatc	gctgctgcca	cccccgctct	ctccttcata	tttttcattc	actaaatcaa	118380
cttttatctc	tgccttaaag	ggaagaggga	cattatcttg	taatattccg	tcaagaatat	118440
gtatcctcac	gatggtatct	tttccacctt	tttctaataa	ttcttctgta	cggatattaa	118500
tcattcgaat	tggcagcaat	gatgatgatg	atgaaccatc	tctatcagga	gccgattgag	118560
gagaaatata	atcaccaata	tcataaccga	tctgccgtgc	agtgcgtttc	attatactgt	118620
gtaacaattt	tggatcctgc	acatcagtga	cacgttttaa	ttcctcagag	gatatccttt	118680
caatattttt	agcgagtttt	tttgacgcg	gttctaacc	attcttcaag	ttcctttctt	118740
ttttcgggtc	ttttctaaca	gcagcggaat	catcgatagc	cgtgctata	ttcccgaata	118800
cagctttttc	tattttcgca	ggttttctta	tgtgtatcac	accagatctt	tcacgggcg	118860
taaaattggt	ctggacaatt	ttcatacca	tataggaaat	aatagaaata	aacacaacga	118920
gaagcgtgaa	ttcaaaggca	ccccaccacg	agccaaaaat	accctgact	gctgtttctc	118980
caaacattgt	tattgctgtt	cttaacggca	gggttggttg	ttcggcaaat	caaggaaaca	119040

aaaaagttac	ccgggcatgg	cagggaatag	aaccagttc	gtatcgtccc	tgattgctaa	119100
atgtatatca	gacgtggaac	aaggcatgga	gtgttggtgc	agacaagcac	aggatgcatt	119160
aatgactcgc	ctagccaact	taaaattggg	cgattctctt	aaagaaactg	atgttaattt	119220
ggaataacttg	agatacgcgt	ctacgcccc	ccttggggaa	ttaaactacg	acaaacaaca	119280
atatgcgga	acagttgaca	tcaacctaat	ggctcatttc	tcctacgctg	ctttgggtat	119340
agaaagtata	ctgaattcta	tacggagagt	tgtagtggct	aatcatcaac	gtagaaataa	119400
tggaaaaaaa	ccttctgaac	caatctcacg	ccctcacccg	ctgggagggg	tagaacctcc	119460
tctatcgtca	gagttggcaa	atgcaataag	ggacaagttc	atcagcatgg	gggcgttgga	119520
cagattgaat	tcagcaatag	tgacagcggc	cttgggggct	attgccagtg	aacgtgaact	119580
attctttacgt	gaaaatgctg	taaactacat	gtacgatgta	gaatttgacg	aaagagatgc	119640
tgctactaca	gatacaggga	atgtagtcta	tctttccacc	aaaatggacg	aagatgaaga	119700
tgacataata	aagcgttcag	aaatattaga	taaggatatca	aaacgacccg	caaaggaagg	119760
tatagactgg	cgccccaccc	ctgacaattc	gttcccttac	caattgattt	ggggcgatga	119820
ttctgtagat	gatactgttc	ttatagatct	catcaccaat	gcgatcgtgc	ctaataattt	119880
tatggcaaaa	tttatcctgt	tcatatgtaa	ccatttaagg	gcagttatta	ggagtatgag	119940
ggaaatttta	tacggtaaca	tttcttcttc	atccgataat	tattttgagg	atggacgtaa	120000
atggtgcttc	tggttgaaacc	tgtacaatag	actggaatgg	ttcatgttag	tagttagatt	120060
tgtaatlttc	ctccactcaa	aaaaggagtc	cttttcaggga	gctgacaatg	ttaacgtgaa	120120
aagacttctg	gtggtagttg	tgagaggttt	tcctcccggt	ctcttggaac	ctgaattggg	120180
caagactaat	ataacgtcat	ggcctgttat	taataacagc	aataataata	gtacactccc	120240
tgtgacagaa	gacaccttaa	tgagactagc	gataaggacg	agtagcgggtg	cccgacatcc	120300
tattttcgcg	gaaattaact	ccttgacaac	agcagtgacc	aaccgtatta	ccttccagtc	120360
tgacagaattc	tgacacaaaga	ttttgtctcg	gcgagctctg	gacgaagaag	aagctggaac	120420
aaaaatgcta	gtaaaatcag	tcaaagagac	gggagaagaa	aaggataaga	acaatacgtt	120480
ctcttcattt	ggtttattac	tgaagaacac	aaaaaatgaa	gaattggaaa	taaacataag	120540
cgataacgat	gatgagacta	cagatgtggc	ttgttgggca	cgacttccct	cgacatccct	120600
tatccgtaat	aggacatatg	cgtttaaaaa	aatatggggc	cttgaggatg	caagtgatgt	120660
agtcgagctg	aagcgagaga	gtgacgccat	tacatccctt	gtcaccgata	agagcagtc	120720
tctcctat	ccgtatgtgt	ccgactggag	ttgcttacta	ttacatccct	gttgtaaagc	120780
accggccata	attaaaagtg	tgtgggtaca	aatcctgaaa	gatttttccc	aggaaaatat	120840
aaaaactata	aatgaaaagg	tacaatctct	ttcatctgag	attgttcaga	aatcaaacga	120900
ccgttttaaa	aataaaaaaa	ttgctgccga	acacgttcgc	agtgtaaaaa	agttattaaa	120960
tacgataagc	aacagggagc	aagaagcagc	actatctaca	gaacactgta	tttggttaac	121020
gattttgtg	aaacaagtcg	ttcagaacac	tctcaacctt	ctggagaatt	ttcccgata	121080
aaaggggaaa	gtactcaaca	tgttcaactc	cttgaccgga	gccttccgca	agatgaacaa	121140
cctagtcaat	cgagcttca	ttgacgttca	ccgagtgggtg	gccgagttat	cctatccaga	121200
attcgaaag	gatgtaaaag	atccggaatc	atccatatat	agaactccga	tatccctctt	121260
ccaaaacaag	gatattgtta	caatagttgg	tgattacatc	ctctctccga	agacgggctc	121320
attccaagtt	ctatacccaa	tcaagaaggt	catcgaacac	ttcccagtaa	tcttccactg	121380
caccacacat	aatgcccctc	tctgggtaca	ccttctggac	gaacgccatc	atcgctgct	121440
ccagagcctg	ctgacgtacg	agatttgtgaa	tgccaagtac	aggggtattg	ttgtcatccc	121500
atactacagg	cgccccatca	actatcaaac	tggaagaggt	ctactgatga	gcaaactggc	121560
gtccgtaaaa	gttctggaca	ttttaatgag	atgtggatca	tacaaattca	tctcattaat	121620
gtcagtatgc	aacaagaaga	acaacaccaa	ctttcttcac	tgctgtgcaa	gtaaatgggg	121680
agaagtggga	agcaagatga	tgctccacat	tgctgaaatg	ttctttgcca	accctactac	121740
tagccaacac	ctatccgacg	ctagtagttt	ccctgatgct	gcagcagagg	acgacaagg	121800
gaaaacacct	gcccattctag	caatccaaga	agataatgct	gatgcactcc	tgttcctgat	121860
ctccctctac	ggcgcaccc	ggtttcaaga	taacaactcg	tacatgaaat	ctgcccttga	121920
actcaagtct	aacaagtgtg	tcaaggtact	atcctttgca	gctgacaagt	acgagatttt	121980
acccaacatt	aacaacaatc	aactagaacc	agataaccatg	tgtggagtgt	gtgcaacatc	122040
tgtggaagaa	gatgaaaatg	aagggaacac	aacaagtctt	tcctggtacc	agatgaattg	122100
caagcattac	atccattgag	aatgcctgat	gggaatgtgt	gctgctgctg	gcaatgtaca	122160
atgccccatg	tgccgtgagg	atgtgggcca	cgaagtactg	gaaagatgcc	ctcctacaat	122220
atttagatgg	ttaaaaactg	ctgagagatc	tgaacacaa	cgtgtacttt	ttgaagcaaa	122280
aaagcaagaa	ttctataaag	agatggaagc	aatgaaacct	cccagagttg	ttgttccctc	122340
tcgcaggaca	tttctcaccc	cagccagaag	aggcgaacga	gccatcagaa	tcgcaagaga	122400
aattgccacc	aacgccatcg	ctgaagccac	agctcaagga	gatgtcaact	cctacttccc	122460
tgttctcatt	gacgggagcg	gagaagaata	tgaagaagag	ggagaagaat	tcttcaattc	122520
tgaagaggag	gcgcttgctt	ttggaagacc	atttctggaa	gatgaggaag	aagccagaca	122580
aatacagatg	gcgcagtttg	ctgaactgtc	tagacgaggc	gtttctgtca	atattattaa	122640
caatgataat	cctcatcgac	acatctctac	agtaaatatt	gtgcaaccag	tttatggagt	122700

tgaaaagtca	cctgctgctt	ccttcattcta	caacatgctc	aagaatgacg	tctttgagtc	122760
tatacgctca	agagatactc	gagttggagg	agaaagagt	cccgtcatga	acctgtccaa	122820
tgacaagagg	gcattattcc	acgcagcttc	ttccatgctt	tgtgactttg	ccacagaaac	122880
aaactctcaa	attggtggat	tggaactttca	agcagtgtat	gatccccatc	acatatccaa	122940
ctatatcgag	acgtttggta	gtcctcttca	cgcctaccca	ggagccgtca	cttttctgga	123000
cggggccag	gactattatg	cagagagtat	cagatacgac	aatgatattg	tctcattctc	123060
agaaatggca	agtgagttgc	acatcaccga	agcatttagat	gtctttgagg	gtagtttatt	123120
atccccactg	ttcaagaaaa	tcaggactgg	aaaatcttac	tctaactgga	acgaccattt	123180
gaggcgtaga	aattatgctc	gagatattgc	tgaggaaattt	gttaggggtat	gtgaaaactc	123240
tctagcttca	cgcaaacacc	cccctgttca	tgtacatccc	tttagagatg	gagcaatccc	123300
cattctcatt	gaatatatag	tagatttcat	ccaccactgc	atcacctggt	ctatgcaagt	123360
taatgcactc	cattgtatga	gaaagtacat	tgaacacgag	aatacaaatg	tgcacctgtt	123420
aaacttgcgt	cctactgatg	aaagggtgga	agttttaagg	gtatctcaac	tcagatggag	123480
ccgcttggtc	aatgaacaat	acaacactag	aatgtccctc	agcaccaaaa	gattgagcgt	123540
catgaagatc	ttcaaccatg	atttgggtgt	gtctaaattt	gggtgtatata	aactcctaga	123600
tattattgaa	atgtactgtt	ttactttaat	ctaaacaata	aaaataatgt	aaagaattcc	123660
atgtttttca	tccctcctcc	tctgtggtgt	gtatatataa	ggcgggtagc	ctcctccaca	123720
ggcacacttg	tccagtagcc	gttgtcgagt	gaacatcatg	gcagcagacc	tcctagagtt	123780
ggcatctcag	gaaacaatcc	agtctgaatt	ggaagaaatt	gccgatactg	aattcctcaa	123840
ttatcttccc	cataaaaactg	gcactctgca	agaagctgca	gctaattggac	ggccatgctt	123900
tcctacacta	gaaatgagga	acgaagttga	ccatttcttg	tcccaagata	acaggaagct	123960
gaaactcttg	gggcattttt	gtggcaactt	gtatgtggag	gcatttatag	ctggttctat	124020
agatgctgaa	acgtgctgtg	gctttttgag	gtcgcaagca	actggactag	gataccctct	124080
attgaaaaaa	ctagccctga	ttgcccgtga	ggataaatca	aatacaacta	attacaactt	124140
gtacattgat	agaaattcaa	tgatgaaaca	agtttttagt	gctgaaattg	ataagcgtcc	124200
ttcatcaata	cagaacactt	ctcacacaaa	atcttcccc	gtgtacttga	aactgatcga	124260
cagaagaacc	gagtgctctg	ccctggattg	gctggacgca	tccaagagga	cggccaagga	124320
aattggagca	gccagaaagg	tttgtttcct	ccagaacctg	attgttgcca	tattaatacc	124380
tgcatacaca	gaaacgtttg	ttcttgatac	aggcaacgaa	ctagaacagc	aagtattgga	124440
tgatgcatac	tttaatgcgg	agaataaaga	taaagtggat	gaaatgtgtg	tagtggccat	124500
attgagtact	ttgcacaatt	tatttgtag	gaaaagtctt	ccccatcatt	tgtacaatgc	124560
acctttccgt	cttctccct	ttggacaaca	cccatctatc	aacattgaaa	attcctcatt	124620
ctttaatgaa	gatacgacac	ctatttctagc	gtcaatttct	ataccatcaa	gtatggtaat	124680
aaaacaccat	acgcgaaaaa	atagtagatg	gagatgtccc	aataacttga	tgactgcagc	124740
agaacggtct	atattttttac	gtggagtttt	aacagtcagt	ggagattacg	gatgggtttc	124800
tgtaattgta	ggatctacta	taatgcctag	tgtacttttc	tatggcgacc	gaaaacatct	124860
ataaataaca	gtcaaatcta	ataacttttc	tgccataacc	tggttcttatt	ggaacaagta	124920
tatggattgc	agatcttatg	ggtttgagat	tatagacaca	cctgaaaata	actgtgggtt	124980
tcgtataagg	gctgcaattg	attgctcgaa	cacagatttc	cattcaccgg	taacgcgagt	125040
caacaagaag	aaaacgagca	ttattaatgc	ggtaaagaac	ccttttttta	ttagacacac	125100
agaacctaag	tggtacaaca	aaaatgccat	gtgtggtgaa	gtatttgaaa	atggtggcgt	125160
gaccctcgaa	caacacgtcc	gtgttagtga	tgagtatatg	gacagatttg	gtagtctatt	125220
acttgacga	gaaaagaaat	ggacgtgtaa	ttatctagat	agaataaagt	ctctagaaac	125280
tatttctaac	aatctcaagg	gtaaaattga	caccatgtgt	aaaatttctag	aaaccaagta	125340
taactacaaa	tcttcttctc	tatactataa	gcaaataact	gctacgtctg	atgatcctat	125400
aaagatgaag	attatcgctt	ctataaacia	gaggagggtat	ttgtgtaata	ttctagaatt	125460
tgctataaatt	tcacagaga	aaaaggatga	gggtggaggaa	gatcacacta	aaaccggcaa	125520
tggtggttgt	gcgttttcaa	agtataagaa	aaaacaactc	gaacctaaac	aacattttaat	125580
tggttaaagt	aataaatata	ttgaggcttt	tgcgttaatt	aagatgctga	gaaatgattg	125640
cgaacgcaac	aaagttaggt	ttaaagaggc	tgaaatttaga	gagtgcgcca	acgaagtggt	125700
acgagaactg	tatagggctt	cggccagaag	ttatgtccac	gatctgggtat	tgaagcgaac	125760
taatgtccac	ttgacatggc	aacgccctta	cgatgaaaac	gctaacacta	tcattgtctt	125820
aatacctaaa	tgtaagctac	acacagttat	gtacgataaa	gattcgcgcg	atgttaagtt	125880
gttgaatttt	ctgagaacga	gggatggaaa	ttataaccca	ataagacact	ctatgctgga	125940
gttagtatac	ggagaggagt	acgctaaaga	tgtcagtact	gttacctgtt	ttgaattggt	126000
aaaaatggtg	tcgaaaaaag	gtgtgattaa	atgtgaagac	tttttggtatc	gttacgagaa	126060
aacgggggag	gaagataaag	acgaaaaggga	attcttttaga	ctaaaaaaat	gtagtagaga	126120
tcacactaag	gatataaaaa	aaatagaaaa	tgtactaaat	tctgatacac	tttattctta	126180
ttctctcgat	aaaaatgtgc	aaaccacgc	atcttctagt	acagttgtaa	aaaatgacac	126240
tgacggaaaa	acgtctatgg	tgggctggga	ttatatTTTT	tcaatcggtg	aaggagaaaa	126300
aacaacccaa	aaacgaaaa	tggaaacgat	agatatatcg	agtagtgacg	acgacgatga	126360

agaagaagag	gaagaagatg	aaggaaaaag	aatgaaaatg	aataactgca	gcagcagcat	126420
caagaacaag	agcaagaaca	agaatgggag	aatgtgttgc	acagatattc	tcaatgttgt	126480
agaaccttct	ctaccttaata	ctttatcggt	caatttgtga	aaaagtatgg	atgtgttgaa	126540
tttgttatga	tgtaaaaaat	aataaaaaata	ttgtacattt	tattacattt	gtttgttttg	126600
acacctgagc	ggtttgggcc	tggtgacgtg	cctaactttt	tgtcaccctc	atgaatacaa	126660
tttgtaaagg	tgctgaaatg	tacttgtttt	ttatccaaat	ttcctgtact	gaagaatatt	126720
gaaagaagac	ttcttgaaag	ggaccgataa	aaaaatggcc	accttcacga	ctgacgccga	126780
tttcttgctg	gtgggggatg	atactagtag	atatgaagaa	gtgatgaaga	cttttgatac	126840
tggtgaggca	gtcaggaaga	gtgatctaga	tgaccgtgtt	tacatgggtg	gcctaaagca	126900
gggatctact	tttgcctca	atggaggcat	cgaagaattg	cgtcttttga	ctggagattc	126960
aacgctggag	attcaaccca	tgattgtgcc	aacaacagaa	taaaataaaag	acggtgacgg	127020
gagactaata	tctttcttag	tttcccgtca	cggtgaaaat	gttggttatt	tcttccctat	127080
gtttaaaaaat	ttgtcttggt	taaaaaaaata	aaacgaaaac	tgtcaatata	ttgttttatt	127140
gatatacaat	atcccttttt	acacagaaat	ggcatgtctc	tttacacgct	gtgtttcttg	127200
agtgttgttt	ccatcttctt	cttcttctac	gtcgtatca	aattcattgt	cgttttccca	127260
ggtccttttt	actccccttt	gctcctgttc	actggtagac	tgttctccat	tttctcgctt	127320
cttttggttc	tccctcttct	ttacctcttc	aaaccacttt	tcggctcttg	ttctcgtacg	127380
agcttccttt	gtggtcaaat	gtctttcctt	gttgtacct	gtgacaattt	ttgatgtggt	127440
ctccatcatg	gaatggagct	tcctttgttg	ttcaatttca	aattgggtca	tattttcttc	127500
atcaagttct	tgaggcgaag	agatgtctat	cctctgcccc	tcttgataga	cgttgccatc	127560
attcataaag	attcggatat	cagaacctgt	cactttttgt	acaataccct	tcaaactctt	127620
atcacttgga	ggggtctgga	aaactatact	tgatcggtta	cattttaata	ccttgaactt	127680
gttttggtgt	ttgatactgt	cgttgcaagc	gataggtgcg	tcacagccag	tcacggccat	127740
gatgagctg	ggcctcatat	ctgcagtatc	ccttttcttg	tttatggggg	agaaaatgta	127800
cctcaaacca	ttttctgttg	cagtttcaaa	ggaaccactt	ttgtctgtcc	tgcaacaaca	127860
gtagaattct	gtagaggata	tcgagaagac	gagacaagag	ccgctgtcgt	atctgaaggt	127920
cgcattggaa	gatttcttgt	gtacatttct	gagagattct	ttttgttcct	cagagacttt	127980
gaaaagttgt	tcagtttcga	tatacgagtt	tttgtactcc	tctttcttta	ctacttgtgt	128040
ttctagttcc	ttttcaactt	ttgtgggtct	tactacttgt	gtttctagtt	ccttttcaac	128100
ttttgtggtc	ttttcgacct	ggttttctag	ttcctctttt	atttgtaa	ttttcctagc	128160
caactcttcg	cgtactctggc	gttgcttttc	atcactgtat	aagataacag	cgtaggctag	128220
tgctgaagg	tacatttcaa	tgcttgcagc	agaagggtgt	gcgctccttg	caaaaacgcc	128280
cgccaccata	aacaagggaa	caatcaagca	atgtgaagaa	tggctcttga	aaataggatt	128340
ggctatatat	tctcctttgt	aatgggtacg	gtgacaaatt	tcaaccaatg	ggaccatcat	128400
atccttgaaa	ccatgtttct	gcatagttct	ctccattgac	tttaaagcgt	gcgtgacgtt	128460
cattgtactg	aaacctaaac	cgattaagaa	atcggaactt	attatcatat	aatcgtgttt	128520
tttttctact	gcttcagaaa	gactattgct	catgtacctg	tataattgac	tgaatttaaa	128580
gtccttgctc	tttcgtttta	atttttcctt	gactattgta	ttgattttac	gcacgtcttc	128640
ttcttgcggt	gcaagccatt	cctcgtcagt	aacgtgccca	gcatcatctt	tgaataaatg	128700
tccaggttca	ggaggggcac	aacttatccg	ttcaattctt	aaagagtcac	cttctaccaa	128760
ttcttgtaat	ctttttaacc	ctcttgcgaa	tttgagttgt	ttatctttct	tcacatgtac	128820
aacaaatgtg	tcttcggaca	attcgctttg	tcttatagat	tcgatagctt	cataaacacc	128880
catgacttgc	tcataattac	ttgttttctt	cccgatcatc	aggaatgacg	atcttagttt	128940
taactccttt	tctgatacac	tttcattact	aacagggtta	ttgtttttct	ctccaatgta	129000
ttccatattt	atcttcttca	aaacaacaac	ggaaaataca	gttttctttt	aagaaatata	129060
ggttacaata	ctgtggattg	ataattttac	tcacagcttt	gttcaaaact	taactacgtg	129120
gttcggccca	ttttgcacca	gatctgtttt	aaaggaactg	ggtaaaat	acatgaaaac	129180
actccttttg	aacaaattca	gatttatatg	tatttgtcga	tttttattaa	tattaataaa	129240
gtatatattt	aaaaattagg	atggggacag	atgggtaga	ttgatacagt	gaccgtccct	129300
gttattttac	cttaattttt	tttccctata	atacaataaa	ttggatcag	tttaggaaaa	129360
catattttta	aaatgaagggt	tatcatatca	actaaacact	tttatttacc	cccttttcac	129420
ctcagaaata	tcctcacata	atcgcatgca	agacttgcgc	atttcttccc	tgccgtacaa	129480
atcaatagca	aacgctaacc	ccaacagata	cgtctccact	tctagagatg	ggggttgaac	129540
attacgggaa	aacatgtacc	ctagatacac	cagtgggaata	actaggcaat	gggaatgata	129600
actcttgaaa	atgggggtta	caacaatatc	acctttgtat	tttttgagat	ggcacacttc	129660
ggccacaggc	acctatgtat	atctcagacc	acctttccgc	atatttccct	ctatcgctat	129720
taatttttcc	atgacatcat	cagcactaaa	accgagacca	atcaaaaaat	ctgtgctaac	129780
aacaaaacgt	tccttttccc	cgaaagggtat	ttgaggaaga	ctttttgtta	tataacctgta	129840
agttggactg	aaataaaacc	ctctaaacaa	catccgtgtc	ttttccttta	cgagcttatt	129900
tacttctctg	acgtctttgt	cttgagaagc	aagccactcg	tcacatgtag	ttgtagacgt	129960
gtttttaagt	ataacgtgtc	ctttctcagg	cttaatatag	gataataatg	attctatctt	130020



gaggggaattg tcccctgtga gctctcttaa ttctttcagt ccccttcaa aagtaatgtg 130080  
tttattttcc ttaattgtga caatgaaaac gccgtctcta aattcactct ttcggatag 130140  
ttcaactgct tcaaattgtac tcattacttc ttcatacttt tcatattgtt tttctccaat 130200  
cattagaaaa gaagagcgta gctgtaactc gtcttcttca ggtgtctcat ccaggagatt 130260  
tatcagtttt tgttccccta tatactccat ggttttattta gtcagttgat ttatttttct 130320  
ctttgacaca gtttttatgg tactctggga ttactttact caaaaattta ctacatgtt 130380  
gttaaaagt tgaagtgtatt cttttgtgtt aaactaaca tgaagtacat ttcttagtaa 130440  
atgaggtagg tactgattcg tgatggataa cgatggcgtc ccatgtctag tgatgtgagt 130500  
cacataataa aaagggaaat aaaaataaga actagtaaca tattttttat tttatccttc 130560  
tcaatatgtt gtttgatttc tttctaaaaa tggctgctgc aaaaatggac gctatccttg 130620  
cggatattaa tgggaatgat acagatttat ccaagctaata cacagacgtg attcaaaaga 130680  
gagccaaggc tgtcatggat agaaataggg ctaaaatgga catgaataga agagtagatg 130740  
aggctattca ggaagccgta gcggccaaga acaaaaagc attagtggta ttgataaac 130800  
tcgtggaaga aactgacagc ggacaaagtg tccctccaac attatcgga tccgattacg 130860  
acgcgtgggt agacagagcc atgccttcgc atattgaact tgtagagagt gttgaggag 130920  
attctttgta tgataaactc cctcctttta acgtacaaga catagacgac caaatcggtg 130980  
atgagataga tacaccaata tcttaccttg ccatggtagt ggtaaaagtc gactgtgaaa 131040  
ctggggatat cgaagaagag tacaatcttg ctctacctt tgggtgtgaca caaaataata 131100  
aaatatacag agatgaaaga gaccagattt ttacaaaggc tgataaatct gtgcgtattt 131160  
ttaaacttgc taaattggat agtatatcag gtataaagtag acaactgacg tatgcggtaa 131220  
aaaataacaa tgaatataca gagtttgtct gtagcgtctt tgcagagttt gaatctgaca 131280  
gtgacactac taaatcaggt ataggtattc gtgaatatga caaacctaaa aatgaattcg 131340  
aatatgagga gcgagagatc ttacattttt ttattccaat acaacccgca gggacgaaat 131400  
tattgttata ctttttggtg gacgtcaggt cccgtattat ataggactat aaggcacaac 131460  
actctgtttg aagagaaaaa atgttcgtca taagcatagc tacgtcattg gtgttattct 131520  
tcttccttct tttcgtctca ataacaattt tagatgggtc aaaaacaatc gactctcaac 131580  
cttttaggaa aaggaggaag aggaagagat atcgtaccag tgagagtggg gacggcatag 131640  
acggaggaac tggacaaca aacggaggag gaggaggtgg aggagaagga ggtgggtggg 131700  
gaacaaatgg aaatggaact ggaacaacaa acggaggagg aggtggagga gaaggaggtg 131760  
gtggtggaac aaatggaat ggttctggaa caacaaacgg aggaggaggt ggaggagaag 131820  
gaggtgggtg tggacaatgg ggaggaggaa atggaaatgg aggaggaaat ggaaatggaa 131880  
atggaaatgg aaggagatac gacacagacg ttattgagcc tacgccagcc cttctaaaaa 131940  
aacgtctact taattccata tcttcaaaac cttaaagaata ctatgaagca ttcgtatctg 132000  
cagaggtaga aactgcctta caattatctc gagatgattc taccctaaact ataataattg 132060  
atgacgacca attagaattg gacgcctcag acactctaca aggaaaacca agggattatt 132120  
tgttcaagct cgcaggtgtt tcatcggcct ttttagaagg taccactatc cgcaaagcgg 132180  
aagaccgtgc ccgtaatata aatgaggaag aaattgcaca aacaatatta agtcaactaa 132240  
gagaaaaaca catcaacgat gaatacagat gaaaatatgc cacaccgag gaaagagctg 132300  
atttttccaa tagtcttaat cttgttacta aatacacaaa ccatgaagtg ggtcttttag 132360  
taggagaaac tattgaaaag gctttccctc atgagattga gtttgagaga tgcataattc 132420  
tagtagagga ttttaatagt ggaactatta cttcaaacac tatgcagtac aggtccaacg 132480  
cttacaaaat cagagtagta gaaggatcaa caacagatcc aggggaagtt gtccctgatg 132540  
attgtttggt ttttgccgta gtagtaaata aggaacaaca ttctctagaa atatctgcaa 132600  
ctaacagatg ccaagacata tgctttgtaa tttatccgca ttatccgca ataggaaaaa 132660  
atgctaccat ggtaataagg aaaggtgatg aaattaaaca agaaacctat ctgtttgtgg 132720  
ccaataagaa tgacactact catttttcaa tcatcacaga caaggatgaa tctgttgga 132780  
tagaattaaa catgctcatt ttctcagaaa gaattctccc cactttgagt gaccctgcaa 132840  
ccgttccaag acctttgact gacgccaacg tactgtcagc ctacggaaag cgcctaggtg 132900  
ttggtgcctt tacagacaaa aatttattgt ccagccaata aaaaaaatat aaaaaaagat 132960  
tgattgtttt attttcaaaa aaaaataaac accatgggag ataagcaaaa ggtggaacag 133020  
cttttaaggg aattaaaggc agaggctaata gatgattggc tatcggctaa tgttgatcca 133080  
attgttgaga gatttgacac aactaaatct gatgagacag cccaagttgt taaacaggcc 133140  
gttgatgaaa aatacagatg attattagaa gataaggttg aagaaatgag accggatata 133200  
atcaatgaag catccgaaac atatgataaa cttgctgctg atatgataag agaggtagac 133260  
actagtagtg ttattgtccc tgcaatagtg ggcacagtg caagaactat caataattta 133320  
agagataaaa ggaagaagag ctatggacat tagcctacaa accatggaga 133380  
agatatgtac aagcaattac agtgatggaa tttcgtttat catataaaga cctgactgtc 133440  
catgccaaat ccgatacata ttttaacatt ccttttttaa gaataaaaaa gatcgccctat 133500  
attaataacg accgcgccag cccgtgaac tgctccttgt cagtgtctta tccaacaag 133560  
tccgagtggt gaaatgataa cggagttgga cgtaaggttg acatacacat cagaagaaat 133620  
gatttacagg aaaaggatct ttacctgtct gttatttcta tgtagatac tgatttttca 133680

ggatatgata	aagctgtgga	agttgatgcc	cataaatttc	atthttgaagc	agggaaacagg	133740
actatgtttt	tacccaaaaac	ctctaatacta	tttaatcgat	cgcatatagt	aaactctaaa	133800
atatgcacta	tagtgttccc	tcccgtttct	gccagttctg	cttctacaac	agaactggat	133860
aatgtctatt	acaggatcac	atgcacatgc	tcctagaggg	ggggggtggc	tgtgtccttg	133920
tataaaaaagc	gaggttggca	cagactatca	aacattcagc	cgtaaaccat	ggaggaagaa	133980
agtcaacgag	tacagaggag	gatcggagtc	ctcccagaag	aggctgcctc	ccagatcctg	134040
aaagacacca	agttaagagt	atcataatctg	ggcgtgggac	attggggata	ctctgtttca	134100
gttataaaaa	gtgctctcca	gaaaggatgc	aggaggaacg	atgaggatat	aactgcgtgg	134160
tcaatcaggg	aggcttatct	ctattaccat	cttggattga	attacattga	aaacgtaaaa	134220
cctgctgcaa	aatcattaaa	tacaaatatg	gtaaacagaa	ttaaaatcat	agctgtggag	134280
gataccagtc	ctagaagtat	gggtggttct	aatgagtgtg	tgagaactct	agaaaaatat	134340
gaaaagggga	atthttaggca	acccagttac	ttgatggatg	ctgccatgag	gctagttcac	134400
gcctccagtt	ctagagtgtg	ctcccacatg	agagctttgt	gttgcaagga	agaggacagt	134460
gataaattag	gggttattht	ttatgctaatt	tttaatgaac	ttgaaactca	gtgtgttagt	134520
gcagtttaatt	tttctcccat	agaaaagaatt	aaacacgtct	tcagggagat	tgaaaagtgt	134580
aaattgggga	agaaaagtgt	acagttatta	aattttaagaa	gtgtagcagc	ttaccatgtg	134640
ttaagatatt	atggggataa	agtgaagat	acaaataaga	aacatagtgg	accattcaag	134700
cgaaaagagt	ttgagcagtt	ttgggggtta	tgctthtaaat	ttgttactca	gcacgtaaaa	134760
acagaccctg	aattacgttg	ttattthta	gagttgacat	atgccataaa	ttggagaagg	134820
gattthttct	gctcaaaaagg	gttctthtaga	gaagaaaagtc	tattccttac	atctattgtg	134880
gaattaatta	tagccatgtg	cataggtgac	cgtaaacagt	ttgccaaagt	tcagaaaagg	134940
gattthaaac	gtthtcaataa	aggagaagaa	gggagaaaag	aagaggctgc	tacatttgat	135000
tgatagaga	gacatgttaa	acggatgcct	caaatgcctg	tatgggttct	ggacaaacat	135060
acgaacaaaa	acacacatgg	agtatctttt	gccctagaga	gtagtatgg	ttctggagga	135120
gacaagcgct	gggtcccagg	gggtgtggct	cattcttata	caaagatgcg	tctagattct	135180
ccccctcccc	cagaagtggg	ccaatttctg	gatcaggctt	ttaatacatt	gaagcgagaa	135240
gctgctagtc	attgcgtaac	gaggaatatt	tgtactacta	caggatttat	aaaggcttct	135300
agthttactg	ctaataatta	ttctgaaccg	atggaaatta	aggaagaaat	aaagaaaaga	135360
aaaattgaga	ttaaggatga	taatactact	gctactgtta	ctgttagtgc	tactactagt	135420
agthtctatta	cttctactcc	acctcctaca	aagaaacaaa	aaacaactcc	aagtggagc	135480
aataaagtag	actctataca	attgaataat	ctaccaactt	taaatatgga	ggatttagat	135540
agagtacag	aagtacacaa	ccaaaactct	aaaaagggtg	tagctgctac	agthtttaag	135600
aaggatggaa	ataaaagttgt	gtthtaaggag	atgagaaaaa	gctthtggtg	gggttctcat	135660
cagaattttg	ttcaagtact	aaaggatgaa	gatgtgtgta	aattggacta	ttgttgcca	135720
tgccctgata	gcggaccata	cagaggatta	tacagatgct	atthtcaaat	agtaaaggat	135780
gaaatttcga	gtacagctgc	taggatagaa	aaagtgaat	ggggagaaaa	tgccatgtgt	135840
tatttcatct	ctgggtgtgt	gactagacaa	gaaggaaattg	ggaaaaattat	aacagatgtg	135900
cgctttcac	atatgggacc	aaataaacaa	tatgtgtatg	ataactatag	gcaattata	135960
cacattthta	ttthttagatt	gttgactggt	gtgagtata	ccaacacatc	aaacattctc	136020
gtaggtgatg	gaggaaactt	gttctctgtg	gacgagaatt	atgtgggcgc	aaaggatccg	136080
aggacagctc	tcgaaaatag	aaagataaag	gaactacaat	tgctactgaa	gacttctctt	136140
aaggtaaaaca	aggtaacaaa	ggaagatata	gatagctgtc	ttccatcttg	gctatttgat	136200
acatcaaaaa	gtgataaaat	aatgaatggt	gtatgtata	ttggtaaaaa	tatgggaatt	136260
ggtcccacta	ctthtgatat	tgtaagaagt	aattgtactt	gtattthtagg	ggctgtgaat	136320
gacctgcttt	atgacaacaa	ataaaggaat	aatactttat	acaatttttc	atttcttctc	136380
thtttaaaagt	gtataaaatt	tttctaagac	aaaagtgaat	ttgaggggtg	gtcataatct	136440
agcacatttc	atccccthtt	cccccttctc	ttcttcttct	tcttcttctt	cttatttgaa	136500
agaccctggt	taggtccctg	ctaagggtag	gctgtaacct	accatataca	ctagagaatt	136560
ttactcttcc	tccatctcaa	aaactthtt	aaaattthtt	tgggtcactc	gagthttag	136620
ggtgcaccgc	tgggtcgggc	tgatgtcaag	ttcgagggt	ggaccgctgg	gtcgggcca	136680
tgctagattg	caccagaaac	gtctgttgct	ccagaaacgt	acattaaatt	tctactgttt	136740
ctggaacagg	cgthttctgga	cacaccagca	cccagaaagg	gtaggctgta	acctaccata	136800
tacactagag	aattthttact	cttctctcat	ctcaaaaact	thtaaaaaat	thttctgggt	136860
cactcgagtt	tagaggggtg	accgctggct	aggcctgatg	tcaagtctga	aggggtggacc	136920
gctggctcgg	gccaatgtca	gattgcacca	gaaacgtctg	ttgctccaga	aacgtacatt	136980
aaattthtca	tgthttctgga	acaggcgtht	ctggacacac	cagcaccag	aaagggttag	137040
ctgtaacctc	ccatatcac	tagagaattt	ttactcttcc	tccatctcaa	aaactthtaa	137100
aaaattthttc	tgggtcactc	gagthttagag	gggtggaccgc	tggctaggcc	tgatgtcaag	137160
ttcgagggtg	ggacctctgg	gtcgggccaa	tgctagattg	caccagaaac	attgcgtact	137220
actcccatgt	ccagaaatat	ctagatcctt	tctggttctc	gcccaccacc	agatatctgg	137280
gaagccttag	gcgagtcag	thttcttgcac	catgtatttc	taggaatttc	gctgacgtca	137340

ataaactggt	ttgtcatcct	gttttatcca	gtttgctgac	gtcaatagac	catatttggg	137400
catctcgccc	acacagaaac	aggatatgat	atcatagatt	tctgggaaga	gggtgttttt	137460
tgtgccgac	tgggtgtata	aaagagcgct	gcggagaggg	agaaacatca	gacagacttg	137520
atctgtacag	ctagcagcag	cagtagcagc	agccaagaga	agatcggacg	caaaccattc	137580
tcgcagccat	ggcagcagca	gcagtcctcag	gagaggggag	aatctctgca	gatctactcc	137640
tgttggaaca	actcaccctg	gacggagacg	tgataagata	cgactctgag	cagtacacca	137700
aacctaggaa	gatctttggt	gacaaaagtg	tgatagagac	tattggacat	tttctcatcc	137760
acaaccacaa	ccaaggtgag	agttaccaaa	tcgcatcttc	tgtgttgga	aaattccccg	137820
ctctactcaa	ttgcatatgg	aatggagagt	cgggaggaat	ggctctatgg	aaggcattgt	137880
acagggctaa	aaagtataga	cttctcaact	cacttttggg	ccacaagata	aaaaattggc	137940
cttcggttgc	cgtgatccct	atctacgggt	cagtgtgtga	cagagaagaa	aggcccatca	138000
tcatgagtga	gattattgac	aaggaaactc	ttcagaccat	atgtaagagt	gatatacgtt	138060
ctcttcttgg	aatgatgaac	gccaagcatg	gcacattggg	aggtaatttt	ttacacttct	138120
atgcccgtc	aactaaaccg	tttgaaaatt	tccaatatga	agcaatggga	gctaattgag	138180
tgctaattgg	agctgaagct	atttatgatg	gattcagaga	ccatggctta	aacccatcag	138240
aataactttt	tcctggtttg	gaatctgctg	atgtgtacgg	aaacaatcca	gtggaaattg	138300
caatatcagg	agatgatgac	aatatgttgt	tgaacctcat	ctgcaactat	ggtgtatctt	138360
atgaaaaaac	tcgcggctcg	gtaaatagat	ccttgttaga	ttttttaaaa	atgaacacag	138420
cttcaaagtg	tctcagtggt	ttaaagtttg	ttgaaaaaca	ctttaaaatt	gagtcaaata	138480
cacaaaaagg	agaatttgaa	gaaaaggccg	aaacatgtgt	taattgtctt	gatagaaata	138540
atgtgttgac	taaaggtctt	gaacaagaat	cttacaagct	ttcttgtgga	cactttcttc	138600
atgtaaaatg	tttgaggaat	atttgtatag	tatcacaaca	cctaagatgt	gaaaaatgtc	138660
taaaaagatt	tgatgagagt	attttgagaa	agtgtacacc	taacttgaat	tggtggttga	138720
ctatgccggc	aggtgctgga	aatgaagaag	aaatatgttt	catgagaaat	aagaaactgg	138780
ttgatgattt	cagaaaattg	ttgtcccctt	tctcaattcc	tcatttcttc	aaaaatagta	138840
gacagcgaat	ctttgatatg	ttgtgcccct	acagtgacca	cacgataata	ccaaataaag	138900
aagatccaaa	gaaaaacgaa	gatggaaaca	gagtggaggg	caaccacaca	gccatcagtg	138960
aaaagcagaa	caaggaggaa	gaagacgcga	ggataaagcg	tgtagccgtc	aggacattta	139020
cagccatcag	agaaaagcag	aacaaggagg	aagaagacgc	gaggatcaag	cgtgcagtcg	139080
acatggctgt	cgcagccatc	aacgaaaaga	acaaggagga	agaagacgcg	aggatcaagc	139140
gtgcagtcga	catggctgtc	gcagccatca	acgaaaataa	caaggaggaa	gaagacgcga	139200
ggatcaaagc	tgcatcgacg	atggcggttg	cagccatcaa	cgaaaagaac	aaggaggagg	139260
aagacgcgag	gatcaagcgt	gcagtcgaca	tggtgtgtgc	agccatcaac	gaaaataaca	139320
aggaggaaga	agacgcgagg	atcaagcgtg	cagtcgacat	ggcggttgca	gccatcaacg	139380
aaaataacaa	ggaggaagaa	gacgcgagga	tcaagcgtgc	agtcgacatg	gcggttgca	139440
ccaccaacga	aaagaacaag	aagggaagaa	acgcgaggat	caagcgtata	attgacttga	139500
ctgttgatat	gaggattcaa	cgtatagtcg	acatggcaat	tgtagctgcc	actaaaaagg	139560
acaagaaaaga	agaagagaaa	aggacaaaaa	gggaacaaga	gttaagggct	gatctgagaa	139620
gggcaattgga	tatggtgaac	gaagtacaga	agaaacttga	agacatggaa	ctagaaaagg	139680
ggtgtaataa	ggatgaagcc	aagaatacta	gtaatgttgt	tagtagcagt	agtgttgttg	139740
cctattctaa	agaaattgta	ccttgtttag	gaaataataa	taatgtgtgc	attggtatga	139800
ctagcaccaa	ctattctgcc	aacaatacta	agaataatgt	atgtgtttca	cctcataaat	139860
tttcttctaa	cgatgcacat	agattctcca	atatgttaga	aactcccaaa	atgtctttca	139920
atttctcggt	caagacataa	aataaaaatt	gtaacatgca	atactgtttt	ttgtaaaacc	139980
cttggtgtctg	gataaaatac	cacacatctg	tgaacatttc	ttgcacacgt	aacactacga	140040
cttttcttca	actcacacat	ctattttttg	cacatgcaag	taaaacattt	cttcaaacct	140100
ctacagagag	atggtatata	aaggctttgt	atctccatca	tttatcacta	ttcgtacgat	140160
gacgtccaac	agaccaacaa	catccccctt	ttcgttctct	gaaggcttct	cgctttcagg	140220
ggataagtat	gatacgtatg	aggatatctt	acttgaaaca	ttcaactgtt	tcaagacatc	140280
ttctcttctt	tctgctcgta	aaagtgaat	agaggataaa	actttaatct	ttcaacttaa	140340
agaaggagaa	aaattccatc	ttgcaaaggg	catagaagag	ctccgtgaga	ttctagacga	140400
taattctgca	acaattgaac	ctattatttc	tccaacgaca	ttcaatgaca	gaaacgaatt	140460
actaaaccac	gagggagata	tatcctcaag	tcccctatat	actcagataa	tgaagcatat	140520
ttcaccagag	catgatattt	atgaattgga	ccttattgtt	ggcactgatt	tgctttttgg	140580
tctaggtgtg	aatctacgca	acgtttctaa	actgtaagag	aaaatatcgt	atggtacttt	140640
aaatgtagtt	gatgtgtgcc	acagaaaatt	tttcaacaat	aggattatag	ttaatcccat	140700
ttcttcgtca	ttctcaaaaa	atgtgtgtat	tattcctcta	ttttctgcag	ctgaagaatt	140760
ttcgtctctg	ggggaatgca	gggatttatt	caacggtatt	tgtgatgacg	tagagagata	140820
tatcaactct	tattttttct	accctgaaaa	tactactact	actactacta	ctgctccttc	140880
gtcgcgccgaa	atggaaaattg	cagatgagga	agaacaatcc	ccaaaaacta	taaagagaaa	140940
tgacaacgca	agtagaaaact	ggtctggtgt	ctgtttgatt	tttgaagtat	ttaaaaacac	141000

gtactacatt	attaatagag	gagatagagg	aggttctttt	gaaaaggctg	tgaagagtgc	141060
aatttcttct	atcaaggaaa	agagatgtaa	aatcacagat	attaatggta	ataaacctcg	141120
attggttatg	gtgataactg	gggtgttatac	agaattgtac	ttcaaagatg	cacttaaaca	141180
gattggagaa	aacaggcgca	aatttttgaa	aatgaatggg	aattactttt	ctctgattga	141240
tgaacaagca	gatctaatacg	aattcgcgat	gagtgtttct	ggtgccgggg	agaggatttt	141300
tgtaaacggt	ttggggatgt	tccagaaccg	taaaatgata	cctgtaattg	atcctctcac	141360
atatgaaaa	gttgatgtg	gtgagcatga	tatacaaaaa	gaagatgcta	ttctttctgt	141420
aaggagagct	attgcagact	ataatgactt	tgtaagttaag	aacaagagag	ggaagaaacg	141480
cagcgcagaa	gaagaaaatg	aagatgaaga	tgacagcgt	agcagcagca	gcagcagcag	141540
tcctcctcct	tcttctcctc	ctgcacataa	aaaatcacgt	cttccggatg	aaggcgaaaa	141600
atgtacactc	tgtaattttt	ttcaaacaat	aaactaacca	ccttgatatat	ttttgtttgt	141660
ttgcaacacc	ctttttatga	taccattaag	acacgatggc	ggtaaacttg	gataatgttc	141720
ttgtgaatat	caacaacaag	gatgaagatc	ttacaaaact	cgtatccgag	gcaataaagc	141780
ggcgagctaa	aactgtattt	gacactaaaa	atcaagcagg	gtttgacatg	agacgtcaag	141840
ttgaagctgc	attatatgaa	gcaatatcca	aaaagaaaga	aaaggccata	aaggcattcg	141900
atgagctcat	acaagaaaga	ggtgatgaaa	ttacaccttt	gactacaatg	cagtatgaag	141960
agtgggtaaa	ccgtacaata	actccctcat	tgacgactga	aaatttatta	ggtgatgttg	142020
agcacgccga	ttttttactg	gaccgaatga	caccgtaag	cgaggaagat	attgaagggt	142080
tcgctgcttc	tacttttaag	gaggtatcag	attcaaaaa	tgcaacagtc	atagttaaag	142140
cagattgtga	aacgggggat	atcgatgaag	tgtataatct	tgaccatca	ttcggcgta	142200
ctcaagaaat	taaaatatat	aggtaaaaca	attcctcgga	attggataat	gtcgcagatt	142260
ctttccatat	ttataaaatt	tctgcaacag	atagcgacag	tggaataact	aaaaaattgt	142320
tgatgtgggt	aagggaataaa	aaagcaggtt	atacgtgttt	gtgtagaatt	tttgagaaa	142380
ttgaatcaga	tgggattatg	gccaatacaa	atatcgggtg	cgctgaaaa	aacagagatg	142440
aaattgatga	aaacgaagaa	ggtaaatatg	gttttttaat	acccaaacaa	ccagctgggtg	142500
caaaattgat	catctacttc	tttttaatt	gttggacata	aaaaatgata	ttttatacaa	142560
tgcaaccctt	ccttgggttt	ctggtctttt	ctgtgcttat	tgtaattgta	atgactgtat	142620
tagctgtata	cactgcacct	caaataaaga	aatcgaagaa	gagaaaaatt	gaagatgaaa	142680
atgaggaaga	accgcgtaag	actttggaag	attttgtaaa	gggtcggctc	cttaacgctg	142740
tcaaggaaaa	acctgcagag	tactttgagt	tgctaataatc	tgacagacact	gaagcagcat	142800
taaaaaactgc	cgaagaaaca	gcccttcgag	attttgttat	tgagaacgac	tctgtcgaaa	142860
tagatgtgat	ggaagtactt	gaagagaaca	caagagaata	tgtcttcaaa	ttggcaggcg	142920
caacaagcga	aacgctaaca	aacacaatca	tcgcagaggt	acaaaaaaag	gcagcattaa	142980
taacagaaga	agatatcact	attaaaatgt	taaaacaatt	cagggtctgcg	aacaaagata	143040
ataaagacgg	ggaagcaact	cctgaagaaa	aggaagattt	taccaataat	tcagatcttg	143100
tggggttgta	cttgaacgaa	gtagtagaaa	aaacaacaaa	tattgtcatt	aacaaaatat	143160
tcctcatga	gatgggtttt	gaaagatgtg	ctattttta	tgaagatttt	gatactgggtg	143220
ttgtgactga	tcaagccatt	cagataaccct	ccaacaaata	caaaatcaga	ttagtcgaag	143280
gggatgaacc	tgaagtattc	cctggtgact	gcttggtatc	tgacgtttca	gttgataaaa	143340
taaacacagt	cttgaaaatt	tctgcaaaga	acggatgtga	aaacaactgc	ttcgttatta	143400
ttccacgggt	ctctcctgta	ggaagtgttt	cttccatgat	attgggcagc	actgaccaag	143460
tcaaacctaa	aacattctta	tttttagcca	acaaaaatga	cagtacacat	tttcaattca	143520
caatggataa	gcaacattct	gtagggtgtg	agttggacat	gttaattttt	tcagaaagga	143580
acttgaggaa	tttaccggat	tcaaaaccta	gacctctaag	tgatgcagac	atattggcct	143640
catatgggaa	gcgtctagga	actggtgttt	tcacaacaga	aaatttggta	gacgattaaa	143700
taaaatttat	aaccacttta	tctgtagact	tttatgtcct	ttgtgcaaca	aaaataaaca	143760
tgtcttcttc	gtcttctgaa	actcctaaga	cttccaccga	tactggggaa	gaaaggatta	143820
aagacattgt	aaatgctcta	gataataatg	gcgagtgttt	gtcttccat	attgatccga	143880
ttatcaataa	tcacatctca	cgaaaaacgg	cagaaactgt	ccaaaaaatc	aaccaagaag	143940
ttgatgaacg	gtacgataga	aaaaatagcg	acaaaataca	cgaaataaaa	tcattccatc	144000
ttacaagtgc	tcagactatg	tatgaccaat	atgcaataga	cacatttcaa	gaaggaaaag	144060
gagccaacgg	gactggacca	gtcatggggc	cagtgaacac	ggttatcgat	acaactttaa	144120
ataaaatgag	gggaaatatg	ctcgaatacg	ctgaagatat	gtgggacgga	gatgactgga	144180
aacgattttc	cagttctatg	acaacgcttg	aatttgatct	aagttactct	gatttaacta	144240
tgatgcgtgg	tctgaacggg	tattttgcat	tccctttccg	tggaacaaaa	aagataaaga	144300
tggacggttc	aagaaagaaa	gaagacccaa	taatttgat	catttcagta	acatatccaa	144360
acaaagttagg	ggatgagtgg	gaagagggtg	aagaacgtga	agtgaatttt	aacctagaaa	144420
gagtagacga	ctatgaaaga	gatattccatg	tttcaatttt	gtgcatgtta	catgcacaac	144480
ttgataattt	cgaacaagca	ttaggagaaa	atgcaaaactc	tttttatttt	aaaaaggggc	144540
aaagagtcac	gttcttacc	aagaaatcta	aactgttcaa	tagacctact	gtagaagatt	144600
ctgatatggt	ttctataata	ttcccacctg	catctgacca	agattttgca	gatgatattt	144660

attatcgaat	aattgtaaca	tgttcataat	aaaatttgtt	gaaataaaat	acagtaatac	144720
attcaaaatc	ttttattatt	tttcctttct	aatccaacat	atataatggt	gatacattta	144780
caggtgatac	ctgaacatat	ttataaaaaat	caggaatata	cataaacatg	ctattgtaag	144840
ttgtattcat	atccctgggtg	atcatctcgt	gccagatgcc	cctcagcgag	atggagcttg	144900
ctgtaatctt	tgccctgtgg	agtgcctgtt	tgatgcgctc	ttgagccctc	ttcatctcat	144960
gtgctgtagt	ttcatccccc	tcacaagggt	ccatgataat	attctttctg	gccgaattat	145020
acttgtaatc	aatgaggtat	tgcttgaaag	gccagtcac	gatgtcggtg	gttgtagtct	145080
ggatgaggtc	acatttcttg	gcaacattct	ttaaaggcggc	agcagcagtc	ttggcagaca	145140
ttgaattcgc	ttcaatgctt	ccaaaaatat	cctcattatt	ctcgtgcacc	ttcaagtagt	145200
tgccactatt	ttctccacag	cctccgtcaa	caataagggt	gcgaacgtat	ctgcggctgt	145260
gtgtcttggt	ctcaacaact	tccctcttta	gaagattttc	aaccatctta	gtgtacatgt	145320
cagatctcca	attgttggtg	atgtcggtat	gttgcccaga	aaagtccctt	ggcaaaactaa	145380
ttctgaaggt	cttgtagctt	ccataaggag	tagtgttatt	aatgtggtta	atgggcatag	145440
attcacagaa	tggaatagcc	agtgtatgga	cagtagcgta	taccttggtc	gtcacattat	145500
cttcacatag	agcatttaata	agagcactct	tcttgctctc	acaataaggc	ttcacagact	145560
tgctgaaaga	ggaccagaaa	ctcttatcat	aatctacctc	caccattgaa	gattcgtagt	145620
tagtggaacc	catagaaaag	ataataagat	tgccacatc	gacaagtact	gagtagtact	145680
ggctgttttg	cagatcaagt	ccctgatcct	cctcatcttc	atcctcatcc	ttcttctttg	145740
tagactcgat	tgccacacaa	tcctcagcag	cctcagttcc	ggcagggaac	aacttaagag	145800
acttgaggat	agtggacatg	ttgaatgagt	tggtgatgca	tccagaggag	tgtctgcata	145860
gagatagaca	gacaggagtt	gatctgttct	ttgataggag	agaaacatcc	atctcttctt	145920
cagattgagg	atatttggtc	actgaagcag	atggtctgaa	gctgttgtct	gaagccaggt	145980
agagagggtt	cccacgcctc	tcgtcgaatt	cgcactctgt	tacatcccca	aacacaactt	146040
ctgaacactg	ggaagttgca	ccatcatcat	cctcatcttc	ttctgaatct	tcactgctac	146100
tgctgataac	actttccttg	tcattctcat	cctctactac	tggtgctgta	tccttatctt	146160
tactctcctc	atcctcttcc	tcttcttctt	cagcagcagc	tacaacagtg	acagatgaag	146220
acgaagagga	agaagaacac	actgatgagg	cgctgctatc	atcatcatcg	gagtcttctt	146280
cttcttccctc	tgactgctca	ccctcttcc	tttctcctc	tacatcactg	agaccgatag	146340
tttttctaata	aagattcttg	atgacatttc	caactgaact	ttcaatagtt	tcattgttgt	146400
aatcgtaatc	aacttccctc	tcgttttcat	cctcgtcttc	atcctcactg	tcgctgtatg	146460
catatgctga	cttttctgca	tcctcttctc	caaatacagt	attgttcagt	gacttgaggt	146520
tactctccctc	cttggccaac	cacttgctgt	tcttgaagca	acaacatcca	tttctcatag	146580
attcagtgac	actttcttcc	acaatttggt	tagtggtctt	gaaatgtgtt	cctgccttct	146640
tggtagacga	agaactggga	gttgacatga	ccaatccagt	tgacttgatt	gcactatcaa	146700
tatagtttcc	tccaagttcc	ttaaacagtg	acttatctcc	attacttcca	aatatctgcc	146760
tcttcttctc	caaatccatc	tcgtccacat	atacagcatc	agagagcttc	aatgtgaaga	146820
gagggcctcc	cttatcaagg	gccttcttgt	tgagtgttct	aatagtcacg	tgctcatgga	146880
actggagatt	ctataacca	aggaatagat	tggccagttt	tgtagtatca	gtggcgattg	146940
cagttttctt	cacagcttct	ccctcaacct	tgacaatggt	gctaaccaga	tcctttcctt	147000
caaatgccga	cttgaccttt	gagacacacc	catcacaaaa	ggtggaagg	gacagtctcg	147060
tgcgctccaga	gttcatcaca	ctattgaaca	gtaccgattt	ctgcgccttc	ttattcttct	147120
ccaattcttc	gtcctcatct	tcgtcattct	ccagaaatcc	agcaacagat	ttggccagaa	147180
cactcacgctc	aagatgagct	ggcaccttgc	ccaataagagc	gtccagttct	tgaagagatt	147240
gctgcttctt	ctcggcgggt	gtgatttctg	gaggagtctg	ctgctgctgt	tcttcttctt	147300
ctctacaac	ttcttccaca	gtttccgtgt	gtggactcct	gatagtgttc	ctcctctgct	147360
tagagaccat	tcttcttcca	gcagcaaact	tggccttgga	aggagtgtgt	ttcttggcag	147420
aagtagtagt	agtatcctca	aattcataaa	cttgatctgg	ttcctcagag	aaagtgcag	147480
ttggctgctg	ctgctgctgt	tccttgattg	actccatttt	tagaatattg	ggttattagg	147540
attcagtagt	ctggttatct	ctagacaaca	cgtcttgtct	gtacgattag	tcgagatgat	147600
gtgatgtaga	gcccttgccc	gtgcctcaat	atataccctt	cagtagacct	tgataatcac	147660
ggttgccaaa	caacaacgggt	tggaaatctt	agtagaaaga	accaatggaa	caagtcagga	147720
taataatata	cagtataagc	ttttggggaa	caacattcat	ttattgtcat	agcgctaaca	147780
ttagaagtac	aagaacaggt	gattctgcat	ccagctcatt	ttgttcaacc	cacttcattt	147840
gcaggggaca	acactcttct	ttcttgaaaa	atatggatga	agacacttgg	aattcttcaa	147900
taggccttgg	ggcggttgctg	gaggaggacg	cagaagaaga	agaagaacag	ctgccgttga	147960
acgagtttat	agtttccaga	agataactct	atttagctgt	aattggacga	ggagacttct	148020
tgtaatgaga	gaaccacaaa	attcttcttc	ccgtcttttc	tggataaaaa	gtagtcccat	148080
aatatgttcc	tttctggact	accacattat	cttcgtttta	gggaacatat	ctgaccgact	148140
ttctcatcaa	gggctgatct	ccatttcttg	ttgtgcttag	agccgatttg	tattccccgt	148200
cgttcacggt	atagttgcat	atagaacagt	gggatgaaag	gaacttgctg	gttacgtgtt	148260
cagtttgtac	aagataactg	gacgcatttg	ctagttctgg	agggacgtcc	tggtttttgt	148320

ttattgttga	agtaggtttt	atctttttcc	tatttaagca	cacacccttt	gaattaatgt	148380
gtatgcgatt	cgcattgatg	tatatgcaga	ttgtgagtgc	tggagaaaat	ggtatctcaa	148440
aatcggtagc	tggttcaata	atctctgggt	caacttcctg	ttgttcttct	tcctcatctt	148500
tctcttcctt	atctttgaca	cctagaactc	taaggttggc	agtactaatt	attctggctg	148560
cagccgtgct	ggtagcagaa	ggggaagatt	gttgggagat	aacaggagac	atggtgaccg	148620
tgccgtgtcg	tgaggataaa	tggctaaagg	tatatacggc	atgccctttt	ttccggttact	148680
gtgtgcgagg	tcgttttcta	ggaccgtaga	tgaccatctg	ccttctctct	tttttctgga	148740
caacctttaa	ttgccatggt	gttatgagag	gtaaactcgc	ctcatagaat	ccgcaaactt	148800
cctctaaagg	gaacaagtgt	ttcccatag	gggacaattc	aaaaatataa	ttccaacata	148860
ttaaggggtg	tggttttatt	tccttttcat	cgtactccgt	tattgtttta	ctaaaatttg	148920
gaaggtgatt	ttttgataga	ctatcggaca	ttatatccgc	tgcaagtgtg	cgtttatgtt	148980
caatgacata	atcattcgaa	tcaaagttgt	cgtgtgttga	caccatacca	ttccatttcc	149040
atttggctag	tttggagagg	gatttattgt	tgcgcaattt	tagacgtgca	gaaacgtttt	149100
gcatatttat	tttagaaaagt	acaggcaaaa	caacatccct	cacgtcaata	ctgtccatta	149160
atataatcagt	agaatcattg	aacctataaa	catctctctg	tatatcttcg	tttgatgggg	149220
ccaatcgaac	tagaggaact	aaatcccag	ttatgagatc	ggtgaaaata	aagctctcgt	149280
catcaacaat	ttttttggag	cctatgtaca	tctcacactt	actataaaaag	tcatttttat	149340
accctggttt	cttttcccac	ctagaacata	agagtattaa	aactctcgac	aaattatata	149400
tggcacctac	tcttctctcc	atattactga	tagtcttata	catattaacc	acgtattgta	149460
taggtgcttc	tacgtacaaa	tctgaaaatc	cactagcggc	agttccttca	ctaaaggcta	149520
gaacttgctc	catagtcttc	tcttctgaaa	acatttgctg	aattatttta	gtggatagtt	149580
tgtgccgctt	attgaatttt	gtgccagggt	actgggaccc	gaattcgttg	aaatgttgtt	149640
gttgtttttt	ccctacttct	ttagtttcat	gccaggcggg	gtgttcttga	agagcagcca	149700
cctccaggaa	caaatcacag	atggctcgta	ctccatcaca	tgtgcatttt	acagtttcag	149760
ggaaatttaa	tcctgttatt	ttataaaaac	actctctgtc	tattattttt	cccattcgta	149820
gagatttatt	gacattaaac	ccacaacact	cgctctgat	tccattata	aaggctaaag	149880
aatatactat	aatatttccc	gcacttgaac	ccacgagtct	aagagttgta	tattctccat	149940
cgcagttata	gagacatctt	gccaattcgt	ccattgattt	cctgcccgtg	aagcgcacat	150000
ccatgagtct	tgctcctcca	tatccaattt	cagcgtttat	tgaagtcctc	caacctttat	150060
ccttgtttag	gcgctgtatc	tttttcgcct	tctctgccaa	tacattcata	aaagtgtaaa	150120
atttaacgtc	tcttacagat	tccataattt	tttctcgaag	tgttagcggc	ggcgggtggc	150180
gcgatcttct	tttgtagcct	tcaaagataa	aagagtgtta	ttcaacttac	agtgtttatt	150240
ggcccagcaa	ttcttttctt	tcatcaactg	catagtagaa	ggtcgatcgg	aaagaatgac	150300
caatttgga	tccaaatccc	taggtttatc	tagtccagct	tctatgtcca	tactctttcc	150360
tcctattatc	atatagtctt	caaacagtg	tttattagca	gacatgttaa	tcatttcaat	150420
tacagtctgg	aggcatgttt	catgtctatt	gaccagatct	tcacatctt	catcccatgt	150480
cacaccacc	agaatatttt	ctcctttctt	gagtttggat	acattttctg	taatcttttt	150540
cattatccgt	tgtttcttgg	acgccacact	ttcgtagcat	agcgtcggta	ggggagagtc	150600
gcaatccaca	accaagtatt	ttttcatgat	taatttggtg	aggatttgt	tctttgaatt	150660
gaagaaaaaa	atcattcggt	ctgtaccatg	gagacaacta	tggaataatg	cgttcagaat	150720
aacgacgtaa	caaaaccaac	accagatgtt	gctactgtta	caacagcaac	tgagaaacgt	150780
cagtcatgca	aagagaaaaa	ggatcaactt	aaggccgaat	gtcctcaagt	actgagagca	150840
ctaaaattgt	ccaatacttt	aaaggcaaat	tttggaaaa	ccatgtcggc	tatttttgtt	150900
caacatttag	tggacatgac	aaacgctaaa	cactttaagg	acccaaagac	aaagaagatt	150960
ttagaactgg	atggaagtag	tagcagtgac	agtgaagaag	aggaagaaac	tagttcttca	151020
tccaaacgga	aaagaggtag	tggtgctaga	agtgttctt	caaagaaaga	aaaatgcccc	151080
aatactatca	aaaattggct	caatgatgct	caaggtgtat	tccgccagtt	tgcatatata	151140
atcatatcat	ttccctcttt	tgatgatctt	agagacgaag	taaaggatga	acaaactgag	151200
ctaaagacca	tatatgactt	gtatagacag	gacatggaaa	aggtggtgga	agaagtttta	151260
gggcgccaag	acctgtttga	tcacaagtca	gaaatagcca	aaggtttggc	ccgtttccat	151320
accacgtct	cgttgtctcc	ttcggatagg	tcggctgttc	tagactcgtc	catatccaaa	151380
gagttggaaa	aaaatagcaa	gggcccgaac	agtaatat	ttgacacact	aaacacactc	151440
aaggaagaaa	tcaaagaact	tttatgtcat	catgtcaaat	atattattgca	aaatcttaca	151500
ccggaggatg	caaattttgt	gttcaatagt	tctgtaaaag	atgtaagaaa	atcatatcaa	151560
tactacatac	aaacatcaga	gatggaaagt	gatgaattta	agtcccttct	cactggagtc	151620
aacattaaaa	tattggagaa	gataatctcg	tccgataata	atgttgctac	tccttgcata	151680
cacatcacta	atcccaggaa	cattatttctg	tctttacaaa	aagtacgtga	aactaaacct	151740
gtttcaaagg	attatccggt	cagagtggat	acggccagag	atattgtact	acttccagag	151800
acgggtggca	tttctgatct	ccctatcaag	cccgttacat	tattgcagtt	ggtgtcctac	151860
atcaacgctc	tcttttccct	cgagcgccga	aatgttttca	ccgacggctt	ttttaatgca	151920
gcgtgcgtcc	taatttccca	gtgcctaacg	aatgcgaacc	tattatctaa	cgactttcct	151980

aaccaccattg	aactggcagc	taatgttact	cgccataatc	ttctgagtat	gaaaaatgctt	152040
caagaaggtt	catccagtg	aaagaagagt	aaaaagaagg	agaaaaagaa	ggataaaaaag	152100
aagggcggtt	gtgggtggtg	cgattctgtat	tcgaaacag	attcttctctc	atcatcatcat	152160
tcttctctgt	cttctctctc	ctctctctca	tcggaagacg	aagaagaaga	aaaaggagaa	152220
cgagtagaaa	aaggcaagaa	aactaaacgc	aaaacaaaaa	agaaaccatc	aaaggacgac	152280
gatttagata	caattagtaa	actgattcta	aaaacaggag	gttacttcca	cgacacgagt	152340
gaactcggca	ataaaaattag	aaatttaata	gacaaggatg	attttgcggg	cgtagcccaa	152400
tatgcagtaa	caatcactga	gatgcaatct	acgccaatga	atcaaagatt	agtatctagt	152460
cttttagatt	tgataatgag	actaaaagaa	caagtaaaat	atagtgttga	tactgaaagt	152520
acttctctca	cgcgcaatc	taataagctt	ttagatagtg	ctaaattgac	attctcaaca	152580
gtggttacaa	tggtgtgtga	ttctgagct	gaattggcaa	ggctagctgc	cttctttttc	152640
gtggtggtgg	ataatactgt	agttaatcgc	catgaagcat	tcattctaac	atcaaaactt	152700
ttaccctcga	atgaaaatag	aggacttaaa	actgttgtag	agtcattctt	taaaaattta	152760
acaattagta	acaaagtctc	tacctcgaat	gaagaaatga	tgtcgggtgat	gccgttcgaa	152820
gacgaacaac	acaacaaca	atgcctcaa	catgaacaac	aaccggattt	gaaaagagtg	152880
gtgggagaag	tatttctaga	aatgggaaaa	tcaatagtga	actcattccc	ttccaataag	152940
aagtgtacaat	taacggctga	cgcgttaag	caaactcat	cgcattatgg	agacgcata	153000
attttggcgg	caaagataaa	acggctcata	cttatcggat	ctaatatctc	gcccaataa	153060
ctattttcta	acctcccaga	atctgtaggg	aataatactg	taactggtct	aaggctaacc	153120
aacctattga	aaaacatatc	ccaaagtgcc	caagctaata	atataatcaa	aaatgccaac	153180
acgctcgtaa	acaatacgat	ggaccaacaa	aactcagcag	ccatgtccat	actactcttt	153240
cctccaatat	caaaagaaac	ttctatcttt	ccgggaaacg	atccttcatc	tataaaatta	153300
ccagtaactg	ctacaatgtc	aaactctgga	ccgagatttt	attcctatgc	agaaggatgt	153360
atcggggtcg	tacgctcgag	ggaatttgat	gaaggaggag	ttaaagcgta	cactttacta	153420
gtggactcaa	atactatgga	catggcagtt	aattttgcgg	ctcagtcctt	ggaaaaatca	153480
atgtctgaag	ccttaacaaa	taatgcgaat	atgaaccctt	ctaattgtatt	agaaggagga	153540
tcttttgtag	acggtgctct	ttcttacaat	tttgaaaaaa	atggcagtg	ctgtgaaccc	153600
acccctctag	caaaatatac	aatgaaagat	gtatcaaaatc	gatacttgaa	aaaattcaac	153660
aactgataaa	ctacacaaga	tttatataaa	atgagagcag	aaagagtgac	cgtcgaacag	153720
gttacaaata	agcctacaag	tgttgtgcat	tcccagctag	caaacgccat	ggggttagct	153780
gttataggcg	cagcatcaat	caagctcatg	gaagcagaag	cagcgggaatc	tgaatgaga	153840
gcagcaaatt	atcaagcaac	atcaaaatct	acaaatgcta	ttaatataac	aaatacaatt	153900
ggaatgatac	gtaatactac	tcacctgtgt	acgaccatcg	ccgtgagtg	agccgccgac	153960
atgtcaaagc	tcgccaacaa	ccatttttatg	agtgtattaa	acactgcaa	taacagtc	154020
agcagcagac	gaggagacag	atcgtccctg	atgttgacg	acaacaacc	aacacattca	154080
gcatttctgg	aacagacaag	aggaagagga	ggaggagtat	taggatcagg	actgaacag	154140
acaaaggatc	atgtggaacg	tatgaagaga	gattggatat	taaacatgat	atctccagaa	154200
gacaaaaata	ctactactac	tacaccag	aatgccggcc	ggacattagg	atatggatct	154260
aatataactg	gcataaacac	gataaaacaa	gacgacaaga	gtatgatgga	taaactttct	154320
gagatgtcta	gcttcagaac	ttaaagtggc	aatttttcata	taaaaatgta	gtattatgtg	154380
gtcgttttta	aactttaagc	gtttgtggtt	ttgggtcggt	cacggttcca	gatgtagag	154440
tccccttgta	cccaaattat	aacaaagtgt	cagtatggtc	aatggaaagt	atctaaaaat	154500
ccaccgctct	atcattcaat	atcccaactg	aaccaaccaa	cccagaacc	aacaacatgt	154560
ctcttggtga	gaataatacc	caagaagaaa	tgattctgga	aactactgtt	gaaggtgttg	154620
tggagggagc	agaagttgcc	cctagaggtg	tcaagagacc	ccttcttctt	tcctcatctt	154680
cttcttcagc	ttcggatagt	gaagatgatg	aaggaggaga	gcaaccacaa	acgaaacccc	154740
caagaagaa	acgtaatatc	aatagcggaa	agtactggaa	aatcgaaaa	actgaaccag	154800
catctccaga	aatgctcagt	gctgtaaagt	atattgtaaa	cgtgtccaaa	atctatctct	154860
taatcgataa	tagttttggc	gttcagttta	aaaagagtgt	atctgaagaa	cagatcaaaa	154920
cgctactcac	tgaactattt	gccgtggaat	atggaacaat	cacaaatgtt	aaatattcaa	154980
cctttaatca	actcgaaagg	accggagagc	ctcttaagaa	gaagcgctca	aacaatggaa	155040
ataacaacta	cgataactgg	caaattcgaa	ttgaagccgc	tgacgacag	aatgttacac	155100
aaagtgtttt	ggagcgaatc	gttgaaggaa	atgacaccgt	gatcaaggca	atcctctctc	155160
cataggggga	gggaatcggg	cttcaattta	acaagagtgt	tagctctcaa	caagctaaaa	155220
atattgtcca	ggctgccgat	attgaatttg	gacaagttgc	gcacatgaag	tgtaatttgt	155280
tccacaagat	ggagaaggcc	gatgaatctt	ctaattcttc	tggtgaatca	ccaaaggtta	155340
agaaagtaag	gaggaacaag	tcccagccta	caaattctta	ctacactttc	actatgatcg</	



aagaattcgt	ttctgagttg	tacactaacc	ttctaaaggt	tgaagagaag	gtggatcatc	155700
ctactttcaa	gaagcttatt	catgaccgta	caatgaatcg	acacattaag	gcatgggtact	155760
gcatctgccc	ctactacacc	acaggaggcg	ttccccctgc	agctgataag	gtttccgcta	155820
aggggaattgc	tacctacaga	atatacgagg	acaggactgg	agtgttccaa	ttcgatgggg	155880
cacatacatc	tactacccca	gcacaggcag	ccgaggcaac	tggtgctatt	cacaagtcta	155940
tgctcttcca	gagtcctgga	actgatattc	aaaagttcct	cgatgctaag	aaggcagaag	156000
gtttggagcc	tatttcatcg	ggcgaaattg	tgtaccgctc	aaagtggagc	cccaatgata	156060
gcagggcaac	acgctgcttc	aaattttatt	cctcttcaga	cgagaagatg	aacattgctg	156120
atgttttgct	tattgttcat	actgatggac	ttttcagtag	tgtacacttt	agaaaggata	156180
ctatggaata	tgggtgtgca	aagagcaaga	gtaaaattat	ccccaaaact	atcaagatta	156240
agaagggagg	agatactttc	catagcgagg	aggatattga	agtgcctgta	aaattcactg	156300
caatcacttc	ggaggaaactt	aataggggaat	gtaacaccaa	gggaatgaac	agcctccgag	156360
caacacaagaa	acgaaagagc	aactcttcta	ctactactac	ttccaccact	tccacttcaa	156420
caacagcaaaa	tactccaaag	aagacgaaga	agagcgcttc	tgctgccagt	gacctatttg	156480
caaagcttac	tttagattat	gttgatagta	catcatttgt	atttttacaat	atcagtaagg	156540
aaatggtgca	gagaattttg	gctcaggaga	gagtaaagac	gctaaaggca	gtcaagaacg	156600
aagagaagat	ggaaattgta	gagggagaag	aagcacaaga	aacttataga	ggaatcgtaa	156660
agatcaagac	gaatgcaaaag	gcatacaatc	ttgccaaaca	aacatctgga	gtacttttcc	156720
ctgctgataa	ggtgtgtcta	aagcacacat	tgggaagattt	gggggatgta	cttgattttg	156780
atgtttgtaag	gtgagataat	gttaataaga	cggtcgcttc	tactactact	acatcatctg	156840
aaaataaggc	aagcggagga	gatgatgaag	aaactccaat	ggaatttgaa	actgacggag	156900
agaagctggt	gcacgaattg	ttgaatgaat	aatgttgttg	tgttgtattt	tgtatataga	156960
gaaaagaata	aaataaaagg	ttaatataat	gttgtctttt	acattttcct	aaacttgata	157020
taataaacta	tatagcaaat	attaatgcta	ttgacacatg	ttactagtcc	ctagtcaacg	157080
tghtaattgta	catagtaaca	tgccctttct	taggcatttg	aggcaaatag	gaaaagagta	157140
tttacgatgg	gtgaccgtcg	tgataacgcc	tacaccaggt	gacagtatag	aggggttcag	157200
cagactgcaa	atactcacct	aacaggccct	ggtatagagg	aatcaataaa	aaatcaacaa	157260
aaaccttaaa	agtttggtgt	ttcatttttt	tacatcgagg	acagaaatgg	ggttaaaaac	157320
aaatatccga	gctgcaatct	gacattggct	ccctaccagg	aggtccaccc	tccgaacttg	157380
acattcagtc	gacccagcgg	tccaccctct	aaactcgatc	gagctgaaaa	attttttgaa	157440
aagtttttga	tatggagaat	gagtaaaatt	ctctagcgga	aacagtaggt	tacacactac	157500
ctttcttggg	tacgttcata	tccagaaacg	cctgttccag	aaacagtaaa	gagttaatgt	157560
atgtttctgg	agcaacagac	gtttctggtg	taatctgaca	tcgagtcgac	ccagagggtcc	157620
accctccgaa	cttgacattc	ggtcgaccca	gcggtccacc	ctctaaactc	gatcgagctg	157680
aaaaattttt	tgaaaagtgt	ttgaggagga	gagaggaggt	aaattgatac	agatagaggt	157740
atcttttagta	gaggtggtgg	tccttctagg	agctgggtgc	tccagaaacg	cctgttccag	157800
aaacagtcac	aagttaatgc	acatttcttg	agctatccca	tttctggtgc	aatctgacat	157860
tggccctacc	cagcgggtcca	ccctccgaac	ttgacattcg	gtcgacccag	cggtccaccc	157920
tctaaactcg	agtgaccag	aaaaaatttt	ataaaatttt	gagtcggaga	tagaagggaa	157980
attctctagt	gaatacagta	ggttacacac	taccctttcg	gggcgcagca	agtctccaga	158040
aacgcctggt	ccagaaacag	tcaaaagtta	atgtgcgttt	ctggagcaac	aaccatttct	158100
ggtgtaatct	gacatcgagt	cgacccagag	gtccaccatc	cgaacttgac	attcggtcga	158160
cccagcggtc	caccccttaa	actcgagtga	cccagaaaaa	tttttataaa	attttctgta	158220
agggaaaaca	acactaagtt	gcttgtcaat	tcatacacta	gtgcagggtg	gttggaatag	158280
agagtgaagg	aggctatcca	gatattctgga	tcaaccagaa	tccagaaacg	tttctatcca	158340
tttctggaac	agccatttct	ggaaaggggt	acatttttatt	atatttggtta	tattatttct	158400
ggtaccactt	ctggcacatt	cgtgcaatct	gacattggcc	ctaccagcgg	gtccaccctt	158460
cgaacttgac	atcaggccga	cccagcggtc	caccccttaa	actcgagtga	gctgaaaaaa	158520
tttttgaaaa	gtttttgaga	tggagaacga	gtaaaaattct	ctagcgaaaa	cagaagggtta	158580
cacataccct	ttctggttac	ggtcatgtcc	agaaacgtct	gttcagaaaa	cagtcaaaaag	158640
ttaatgtacg	tttctggagc	aacagacggt	tctgggtgcaa	tctgacattg	gcccgaacca	158700
gcggtccacc	cttcgaactt	gacatcaggc	cgacccagcg	gtccaccctc	taaaactcgag	158760
tgagctgaaa	aaatttttga	aaagtttttg	agatggagga	cgagtataaat	tctctagcga	158820
aaacagaagg	ttacacctac	cctttctggg	cgagctata	tccagaaacg	tctgttccag	158880
aaacacacaa	aggttgatat	acgtttcttg	agcaacagcg	tgacagtagt	ttctactaag	158940
ccttcacttg	tacacatttc	acttagtata	atttgcctac	acatgggtcg	caaaaatttt	159000
ataaaaaattt	ttctgggtcg	ctcgagttta	gagggtggac	cgctcgctcg	gtctgatgtc	159060
aagttcggag	ggtggaccgc	tgggtcgact	cgatgtcaga	ttgcaccaga	agttgttgtt	159120
gctccagaaa	tgggtgggga	gtattcagag	tgtgtttctg	gaacagggtac	acatacccaa	159180
ctgatcagat	aaaaattggg	tgtatacat	ttctgatccg	agaaagttaa	ccaactgaac	159240
ggtgtaaaac	gtactgaaac	attacatcac	ccacagtcgt	cctcctccct	tctaagagag	159300



aacatatccc	gtacccaact	acctcaaaaca	acaacaacaa	caacaacaac	catgacatcc	159360
attatggacg	atctctacat	gagctgttct	tcttcttcat	cgtgctcaag	ttcatctgaa	159420
gaggagaatg	aggtaggagt	agaaggagga	ggaggcgaaa	tcggaccaac	agaggccaag	159480
aaaaagatcc	tccgtaaacy	aaagagatct	tctgttaaaa	gtacatcatc	ttcttcttcc	159540
tcatcatcat	catcagacga	ttctgactct	gatagagaag	aaaaagaagg	aagaaaaacta	159600
tacgtggata	ttgcagatac	aaggaaaccg	cccaaagtaa	gaaaactgga	tactccttca	159660
caaacttttag	agaacgacct	ctacatgtct	agttcatctt	cttcttcctc	ctcatcttcc	159720
gactcatcat	cgtcttctgg	tgaagaagaa	agtgcagatg	atgatgatga	cgattatgac	159780
ccagataatg	tccatgttct	tggttgtaag	aaggaaaaat	ctccccaaga	catagaagct	159840
gaaaaggaaa	aggaggaaga	gtatgaagaa	gaattcaaga	gaatggcatt	accttcacgg	159900
ataaacacat	ctgtagatga	ttgtgttata	cctgatcgga	ttttaaccct	cttttctaca	159960
cttttgaaga	aaaatagttt	ccagttctct	cagccagttt	ctttcctccg	gttgggtgatg	160020
aagcaagtaa	acgaggccat	gaattcagca	tctcttccca	tggtatccag	ttctgggtatg	160080
aggttgggtg	aggactcttt	gggtgacaca	tctaaaattt	cctcctttat	aacacctcaa	160140
acggatacta	gtaattcatc	ttcatcatcg	acgttcgtca	ataattgtac	agatgaagat	160200
atcaagaagc	gtaacattgc	aatgggaaga	gtagcagaat	tgctgtcaaa	tattgcagcc	160260
agttctaattg	aggagaataa	tttccgccct	gtagtttctt	taatgcgagg	accaacttgt	160320
ggaggttcta	atgcatccaa	caagaaaactc	aatagtaaca	ggcaaactat	tccccaagta	160380
ttaaacaagg	ttatattttt	tagagaataa	cacagtgtta	tcgcgctata	tttatcgtcc	160440
gtctgtgtg	agcgagcaat	gaataatgac	aacacaaatt	ctagcggata	cgctgaagg	160500
atggttacta	aaatcttgaa	tattattggt	aaaattcctt	ataatgaaat	gagtagagaa	160560
aaattcatat	ccgttggaag	agatgcacta	tatttgtacc	agaatgtgat	cacggatatg	160620
actggcccca	aacataacaa	gagactccgt	atccctcaac	aacaagctga	tttttgttac	160680
attatagcca	tggtgggtta	tgatgttccc	attacctcag	atttactttt	aactggaaaag	160740
gcgacaaatt	tagtacaatt	tgcttctgct	atgggtgac	ctgcataatc	cctggctgtc	160800
cataaaaatgg	cgtctgtttt	caatagtagt	tattccgtat	ataaagtcct	agatcttgac	160860
cataaaatgt	tattaagggc	taatttaatc	ctatctattt	tatcagctag	aaataagtgt	160920
ctcagtgaag	gaaaacctag	aacattaact	cagagcgtgt	atttgttcct	aaatcatctt	160980
ttgcggaaca	aattgagggtc	tagtgggttg	accagtgaag	agagtctctt	aggaacagcc	161040
gtaaaattgg	tgctcacagca	attaatgtat	gagggtgtga	ctcgtcaaac	catcgaggac	161100
ggatgtagca	tgattagcgg	aaactttgag	gatgaagacg	gtgtaacact	gaaatgtttg	161160
ggagccgagt	ttaaggcgtg	gaagactgtt	ggactatctg	cattgtctatc	tgatagctt	161220
agaaaaaaca	ttagaagaaa	cgtccctttc	tactgaaaaa	atatggaaac	tactacgctc	161280
gctttcattg	caatgggttt	gcttttcgtg	gtgttgatgg	tgtacatctt	tatacagtac	161340
acgtcatcaa	ataaaaaaca	gacagaggaa	agaaagggtg	gtaaaattatc	atcatcatca	161400
acttcttcta	cttctgtgtc	aacattttaag	agagaagcgt	ctcctgaatt	aagagaagac	161460
ataccacttt	ctccacgatc	tcttggtcca	gaactgaatc	taactgacgc	tgaatttata	161520
gacctgaac	tcttttctga	agccagggtc	agtcgccgac	gttaacggaa	aaaagggtga	161580
aaccggcaac	tcttctccct	ccttttcgagt	ataagtagag	gcgttgccac	gagccaagca	161640
tcattcgggc	tcattcaact	gtgctgacaa	caactaagaa	tatacattga	aataacccaa	161700
ataatcaact	tttcaagatg	tttggaagtt	ctgctaataa	ctttaatggt	gacaagaaat	161760
cttctcatc	atcatcagct	gccgcacatc	ctgacgatca	gcagttaggt	ccccttggac	161820
tgctactg	tgatttcaag	aaagtgtgtg	ccattcttgc	caacagaaca	gagtccttat	161880
atctgttggc	agatttctcc	aactttaaga	atgtgattaa	caaccctaac	cagatatcta	161940
ttgtgccgtt	tctgggttca	tcgaaggcag	ctgaaagtgg	tagtgcaaac	aagaatgaaa	162000
accaggctga	aaattcttct	aaaggaggaa	gtgatggaaa	gaaatcatcg	cagcagaaca	162060
agtttaacct	attgaacaag	gtagaggctg	aagaaatggc	ctttaaacgt	gtggctgaac	162120
tcattcgcca	tactcctccc	tctaaagata	atccatttag	ggatgacctt	gatgctattc	162180
catcagcga	cccatgggtc	aaattgactc	agaagaatct	ggaatatctt	ttctgggaag	162240
cagtaacaat	tgaagtctcc	aatgatagga	gtatccgtag	tggaagatat	cttcaagcca	162300
gtgaagtggg	ggagaatcca	ttcctaataa	ccatcagttg	tgacattaga	atcctgcaaa	162360
gaatggcact	taatgtcgtg	tggttcttca	acagattctt	ccgcatggtt	tctggacttg	162420
gagtagaaaa	cagggccaat	tccacctatg	tagcaactag	cgatgctatt	gcccagatct	162480
gggtagagat	gctcctcaag	aacttttatt	ctggagaaaa	tgtgccccag	gcactgaagt	162540
atttgaagga	acattatgag	catgtttata	acaagatcag	taaatgtgga	cgtcagccat	162600
cctattttgt	tgttgaattt	gaaagagtgg	acaacacgat	tggatttgct	aattctgata	162660
ctgaacataa	tggatcatca	tacatggaat	acaggtgctt	tgacacaatc	aggaagaatg	162720
catcatctgg	gccaagtggg	ggcggaaaga	gtgggtgtct	gtcttctgga	acattcttca	162780
ttgataacga	aatgggggaat	aacaatagta	gtgcagctgc	agcttctgcc	cctgctgttt	162840
ctgctggagt	ttctccatca	ctttctccat	ttagcagtg	tggagatgat	gatgacgacg	162900
attgtagtgg	tgatgacgtg	tgggggaaga	agatgatatt	caacacatca	ggagacggat	162960

caggagaatc	ttctgggcag	aacggtggtg	gtgcatcaac	ttacaagaga	tttaggtgtg	163020
gagaaaaatc	tgcttctctt	tctcagaagg	aaaatgttcg	tctcatggcg	atgccaaagg	163080
gaaatgaaga	taaacaacta	ctcaagaaca	ttatcaactt	tctgaatagt	gcacttaact	163140
ctgttgaaaa	ccatgtaatg	tgtacagatg	aaaatatctt	cgatgaggat	caagccgagc	163200
attatacgtc	aaacaaggaa	ctatacaagg	ctattgtttg	ctccaaccca	gccaatgtgt	163260
acagagtaat	ggttgaactg	tttgtcaacc	ttattcttcc	ccgtcttagg	aacccaattg	163320
tgagtgcacat	tgaaactgta	caaaatcttc	cttcaacaaa	tgatcggtg	agaacaaaga	163380
agatggttga	acatggatgt	acagatatgc	gctatgacat	ccctccatat	gcaaagggaa	163440
agattcgctc	tagtgccaag	agagcttgtg	agtgcagaaa	actgtgcaag	gacgtgaggt	163500
gctttgacaa	gtctagagag	gcaaactctc	cccctagcca	gaaggcagga	agggaggtgg	163560
aggaaccttt	tccccgcaac	cacaattctc	acaggagtaa	cgctcacgac	tttactttct	163620
atgacaagta	cagggcaagg	atgaacaagc	tcaagaagga	ttcaaagaag	aaggtaaaga	163680
agattgcacac	ctttacaaca	acagacgatt	ttctctgca	agataggaac	gcttttgatc	163740
tacttagaaa	gtgcttctct	tctgctcttc	ttcttcacat	tttctgtcct	gatgtgctta	163800
tggtgcatag	aggagacagc	ttcaatatta	actttgcaaa	caacaaactc	gagtgtctata	163860
atgaacgtaa	cggaattgaa	gaagttactt	cctcaciaaac	ggtcaacgcc	aaggaagcac	163920
ttgaggatat	tacaaaaatt	aaaatgaaga	gaggggatga	tattatagat	gttggtgaaga	163980
gtaaaggact	ttctttgagg	gaattctcta	agaaggttag	taagattgtg	agaaggttta	164040
atgagatcac	aaaccaactc	tgcaacaact	gcaacgttaa	ctcttctaata	ggagatgtgg	164100
atttccacgt	ctttacttct	gtgtgtgtct	acatccacaa	cattattcct	gtgctcgaag	164160
atatctccat	ttttgcagaa	ttgggtgaag	aattgaccaa	gcttgtaaag	gagtgtagag	164220
acgtggctgg	agaggacaag	acatatgatg	atattatccg	caattacgaa	attactgtaa	164280
agtactttaa	gctctttaat	gcactcgtta	aattctgtca	caggaattat	aatgtggcag	164340
taacctctgc	cattaacagg	agaggttaca	tgtgcatggt	gagcaacctt	gtcgggtatt	164400
attgtaagct	gtctgataac	gctatccagt	atcacgaatc	actatgctct	ttgcactcta	164460
gcattctctta	tgcaagctat	tatacgtctc	gcaataacaa	ttctgaagat	ggaggaggaa	164520
actcttcttc	agaaaagagc	aatgcagatg	tagccaagac	tatggcctct	ttctatgacc	164580
agttcgataa	gagtgaagac	agcaagaaaa	ataagaacaa	aacttcaaat	gagatcctta	164640
taaaaaatgtt	ccaaatggat	aggggttttg	atggcatgga	tgatgatgat	gatgaagata	164700
gtgatagtag	tagcagttag	aatgaagagg	aggaggaaga	ggaggaaatt	gtaaagaaac	164760
cagcaaaaga	gaggaaagtg	gaagatgttg	atagcaataa	gaagacactg	ccaaaggaac	164820
ctgccgttaa	gaaggtgaag	caggaagaag	tgctggagat	ggaggaagtg	aaggaagcag	164880
cagcagaaga	agaaaagaaa	gaggaacagg	aggcgaagga	ggaagacgct	actgagtagt	164940
acgacgatac	agaagaggac	gagaaagcag	tagcatctga	tgaagatgaa	gatgatgaag	165000
attctaaagc	tattttctaa	atatcatgtg	tataaaatgt	agtattttaa	aggtataaat	165060
aaacacaata	taaagttaaa	cattgttttt	tatttgacac	atgtacatca	tcaatttcac	165120
atggttatat	ttcttgtagc	ttgctcggca	gcaataagag	caagagaaga	gtcatataaa	165180
acagatgtct	gtgaagcagc	catgataccc	ctcgatatat	tattaataag	gggagttgct	165240
gctatatata	cagcataata	aatcaggttc	ttccaatccc	tagaagccca	cacattgggc	165300
atttttatat	aaaaatcaac	gtctactatt	gacctggcaa	cagccactat	acctagctca	165360
tcaatgttaa	caatcttccc	ctgaaccccc	attacaattt	ttgatttttc	tgaattctct	165420
cgtatagcag	caatacggct	agcttcatta	tttaaccatt	ccaattttac	acttgaaaca	165480
taagctgggg	atttttcac	agttacttga	gatacaatat	tattccattg	agataaaagt	165540
tcctccaatt	gaagtttagt	cttgctcgct	tgtcttgga	aactttgcat	gacgatagcc	165600
gaatctcttg	ttgcagtttc	gatgatggaa	atacagttga	gccattgcat	gtcagtaagg	165660
atatggcgcg	gattaactgg	aacaaacaga	ttctgtgcag	gagaaaagtt	caagtcttct	165720
ggaatcttgt	tgaggttgat	attgtccttg	gtgtgtttcc	atgggatagg	tttctgtgcc	165780
tttgaagcaa	taaagtatga	tgggattcta	ctgtatttct	ttagtgtttc	tgaaatgttt	165840
gtctttatc	ggtcctttct	tccatcatcc	ctaattgtaat	tcaaaaagttt	agatgtgaat	165900
agagaagagt	ctctaatttt	ttgcatttgt	tcattgtgaa	cctttatatc	ctcggaagaa	165960
gtattgttat	tattagcctg	cctctgttga	cgctgtgct	gttggtgttg	ttgagtagta	166020
cttccaatgg	tatttaattt	gtccaatatt	gaacgtaatt	ctacaggcac	ccttctacca	166080
gttccaagag	cacctccacc	gccgatggcc	gctgcagctt	cttcactagc	ttcatcattt	166140
ataaaaagtc	tccccgaaga	agcatagcgt	aaagatccat	acccttcatt	tccagtatca	166200
atagtaatcc	cattttgttc	agctgttatc	ctttccagta	tttcttcaat	ggcctttcta	166260
ggatcttagt	caacatataa	tccatcgacc	ataatatgag	acacgtgctc	gcacacttct	166320
ttaataattt	tcactctctc	gttgctgaca	agcatcatca	ttctagatat	aatagtagca	166380
ataacattcc	taaatttggt	ctgaagaaat	agttcgatct	ctgtgaacgt	aggctcgaaa	166440
cgggcaggca	cattaaactgg	aacaaccgct	tgtgtttctt	gttggtgctg	ctgttggtgt	166500
tgttggatcg	ctcttcttgt	tccaccacct	actatattat	tactgcctct	gagttggctg	166560
gctgcaatag	caatgatggt	ttgtacacct	ttaccagatt	ctgcaattac	ttccattttt	166620

gagtccttcgc	ctgaaattgg	tacagaagga	atcttgggtg	acaacctttc	tagagttgtg	166680
ggtaatccag	tatcatactg	aagaactttc	caaataaatt	cgaatccagt	tcctgccact	166740
gtgcccactt	tactggggaa	aatatcgatc	ctccctgtag	atagaggact	aacacattcc	166800
ttatagatcc	tcattgggct	taaagtgtgt	gtcgatttag	tttttgaggc	ttcataaagc	166860
acagcagacg	agagaagggg	ttcaaagaat	acagtttcca	tgcccaattc	ctttaccgaa	166920
tatttgactt	gtttagatgc	atgaacagga	agatttgtgg	gctgagaagt	cgtaccaggg	166980
aggaatgcgc	taacatgttc	aattttccca	tcaaccgaaa	aacttgtccg	tacaccatca	167040
acgaatgaag	aagaagaaga	agaaagggat	ccagtgtcgt	cttgatgggt	attaatatca	167100
ccaatttcca	tatcctttat	accatcatcg	cgttcagtat	tctttacaac	tttaaagtac	167160
gacaccaatt	cacctttatt	tttcaatcca	aggaatccat	cttctgcgat	attctgacca	167220
tatgtcacat	ttcttgttag	agatttaggt	ggtacataat	ttaagaacga	ttttgaaatg	167280
gtttcagaag	aaaatggagc	agtggcagtt	gtttgctgct	gttgttgttt	ttgttcctta	167340
gaggatatta	gaggtacatt	aatgaaaagt	tccagatcct	tattcatcct	taaaaaccgt	167400
cctgttggtg	caggaagatt	aactacccta	ataggggttt	ctgatgaata	tctggaggag	167460
gatgatggag	aagaagcgac	tgaagtggca	gacttttaagt	tttcggctac	attatctcca	167520
ttcaaaatac	tctgaggtgt	atcggtcagt	gtatagtatc	tgagagacgt	atcattttct	167580
acaataaagg	gaggatctct	agggaaagca	aggcacacgc	ctccattatc	ggctgccgaa	167640
tgaataactg	cataatgtgt	aacaatcttt	gcaattagat	ccatcacggg	cttcttgaat	167700
aataaaaaat	tgtgttgatc	aggatcggct	gtatatctta	gtagcacttc	acgtactata	167760
taactgttta	gttgtctagc	ctcctttaca	gccatacgc	ccgatttcaa	aacgcaatca	167820
aaaaatggaa	gaagaacaac	ttgaagtacc	tgctgggtgca	tgtacatcca	agcgggtctca	167880
tccactttca	ctggctgtcc	tctcataata	tttcttgtca	ttgtttctaa	acacgaccga	167940
taaagaccca	ccacgcagtt	aatgggatcg	taccatctgt	actgccgtcc	ataacttctt	168000
cttcgggcca	gtataggctc	ccctgggaat	agtatggaat	cgcagttaga	ttctcttcca	168060
atattgtata	tggatgcaat	ctctcgagca	atatctccta	ccgtaatagc	agatccgccc	168120
gagaaaagtc	ccacaacagc	atcagagaca	tttgagaatt	ccctcccttc	tagatttaca	168180
ttattataat	atatcagaga	tgctattata	gcagcagaag	attccccaga	atcgtctctc	168240
agaattaatt	ttaacgtagg	aatatcaaca	tctggtataa	aggctgtagt	attattttga	168300
ccgaatgtaa	gaaaccttcc	agaatcgtgt	atctccgaca	cgttactttt	tctgtcgaca	168360
acgagtgttt	tattatgttc	agcgtcgtta	agagaggtta	aaaaaagggtg	catttctatc	168420
cagtcgtgtt	tctccgatat	acagtcctatg	attgaagtgt	attgaggccc	aaagaagcaa	168480
gtaactgggt	ttttcatgga	aatggaaagt	ggtgccctcg	aagggacaat	gttggtagtcg	168540
gtagaagttt	tttgccctctt	tgtacgtttt	ctattttcat	cgtattcctt	agaaaaggggtg	168600
gaagatacat	ctcctaaaga	ttttccttta	gacgataaaa	tcgatttgtgc	gattttttcc	168660
ttttgttcgg	tcgtcaatga	ggcggttgag	gaggaggagg	aggctgctgt	tgctgttgct	168720
gttggttcat	aaagtgttggg	ttgaggttta	tttttaaagt	atagttgata	ataccgtgta	168780
accaaatcct	ttaaagaatt	ggtatttttt	ccaaaaaagc	actgggccgt	aaagtagtgc	168840
ataccaaaatt	cagtcgagtt	aaattttgac	aactctggtg	tgataatgga	agaaactgac	168900
ttggagtttg	aagccatgtc	atttaaatca	cgtagccttg	taagagaggg	atgttgatag	168960
agaattttct	ttgcatttgg	gttcttactg	gtgtcaggaa	atgctatctg	gaggggggtg	169020
tttatccaca	ccttcacatc	cattagacga	aatatcacag	ggtgttgtaa	taatttccct	169080
gtgaatctag	aggctcgtaa	aacaatatca	agtatgccgt	gatgggcata	aaacacacca	169140
taggcgtctt	tcaatactat	tgaggaagaa	agtctttcca	tttcccatte	ttcttgattc	169200
agatgggata	tatttcaag	ttcttccatg	ccgtcgtttc	ctttaagatc	tagccgtatt	169260
tctttctcat	catgcattgt	ccagtcctta	atattaatga	caacaggcaa	aagccctgcc	169320
aatctctcta	aagacgaagc	agtttcttcc	atgttcagct	tgatgttgtt	aatttcgctt	169380
tcgataaacc	tctcattttt	acgagaataa	catcctcctc	ctcctcgagg	aaatttttgt	169440
tctgtcagag	atgaaaatcg	tcgtgcttct	cgtgctcttt	tttccactaa	tgcatctaga	169500
gattttgtag	atatttcttc	aatagtcctc	tctttattcg	tctctataat	aaacacagac	169560
gggtgtattt	ttacccttat	ttttgcattt	tctgtttcac	ttcctaaacg	cccctcggtg	169620
aggtttgcaa	gggtagaatc	ataacacgca	aaagttcccg	cattaacaag	cggtagagaa	169680
atcttcgctat	cgccatcttg	ttgttgttgt	tggtgtgtga	gcccttcagc	caataggcaa	169740
gctaaacggc	tattgtcttc	gttgttctta	ccaggcaggg	gccgttctat	tgtttgctgt	169800
tgcggttgtg	acataatttc	ctcctcgacg	tttctcgtca	gcctgtaatt	cgagtagagt	169860
ttgtttcctt	atacgggtgt	gaaccaatag	tcggtaaaac	accaatccac	cgtttacgat	169920
gatggatatc	aacaatatat	agaatagggc	cttgcacta	gccttgacgc	attgtctctt	169980
tctgcagctg	cagtcaaaatc	tttgtagtct	gggcctaatt	cgctctgtac	gtgggtccgt	170040
attctctcag	acacgtccat	gttgttgggt	ggataaagta	taaatactca	ggtgtacata	170100
aaaacctctc	acatgatggc	aggaatcggg	agaagagata	atagaccgtg	attacatctg	170160
gacattgatc	caaataagga	aataccctat	aacgttccac	caacccttat	tatctgtgaa	170220
aaaaaccctt	tcgtgtttaa	catgcagaag	tgctcagact	gtgctccttt	ccctccctac	170280

cccggcactg	agaagccttt	ccctccatac	cctggtagtg	cagtagaaga	ggaggagaag	170340
caaaaggaaa	ttgaggagct	tctggttgac	caatctttcc	ctccccatt	ccctggaaat	170400
aagctgagag	atatccccag	aacctaccct	ctcgaatttc	ccgagaagaa	ggagaaggat	170460
ttcccttgcg	ttgacactac	cggtcacagc	gatatccctt	tcacgatct	ggagaaaacc	170520
ccaccccgtg	gtgacgttag	gcacggttac	caactactta	tcaaccccaa	caaggttggg	170580
gagcttaacc	atatcggttg	taagctcact	gaaaagcaag	aaaacctgaa	caaattggtg	170640
ttggatgttg	atgacgttgt	gattaatctg	tcaagcactt	tgaaggaaat	tgagaagctg	170700
cgagctggcc	tgtgcaagtt	ctcaaaaaac	tagacggtaa	aggtatgacc	aaaccggtat	170760
aaccaacttt	ttatataagc	ctaataattat	aaatcaacaa	ctaacaaacg	cgaaaactaa	170820
caataggaac	catggcctca	tcatcatcat	ccccgtttgc	cctctcctct	gtcgcacatc	170880
ccgtgatgat	ggaaagagat	gaagaaaata	cactgtccct	caggaacagg	aatgtgaaca	170940
aaccaacacc	tgttagcgcc	gcctgggtgc	ctggttgatg	agaggatgaa	gatagggagg	171000
aaatgagaag	acttgaagat	ttttcttcag	atgaagaaga	cgatgataat	aatcatgtc	171060
attgtgacca	tagcgatgac	gatgacgatg	acgaggagga	tccttcacgc	tttaagggtt	171120
tttcagctgg	cctgtgctct	tttgtgaggg	gtttcttttg	cttcctcagg	aagtcactta	171180
ccaagaaaca	ggtgttcctt	cttacaagcg	cagccgttgc	tgctattttt	aagactagag	171240
atgtggctaa	aactgaagaa	ggcgagcaaa	ccatggaaga	aaattcaaca	gatgtgatta	171300
ctggaggaga	tggagatagt	ggtattgctg	ctgatgttgt	ctctctcgct	agtgaggagg	171360
agggagaaaa	tggatctctt	ttggaatcta	ttgcaacaac	actcatcaag	actacaattg	171420
aaaatcttgt	agatggtgga	gaagaaacca	cagaattgta	aaatgttttt	tggtatacaa	171480
ataaaaagaat	acataattta	tataatattt	tattgtttcc	tcttaaatga	caatttcctt	171540
atgatacttt	taggtgaagg	aataaaggta	ggagaagggt	tggaagacac	aattgtagt	171600
tttccataca	catgattctc	ccacatgtta	ttattgttag	gtgggaattt	cttaaacgta	171660
acttgggtta	tacgtggagc	attgttggtg	ttgttactac	tgctcctggt	taggggtgtt	171720
ttcttgtgtt	tcactctcct	caattccttg	atacacttct	ggatagatgg	agattgttga	171780
ggtacttctg	gtagacatgt	tcttccacat	tcttccacat	tatcatcctc	tccctcctca	171840
ttcttgatat	tgaagatggg	agaaggtggg	tttgaaggaa	gcttcagatg	tcgtccgttt	171900
acatatgaca	cgtaatcacc	gccattgctt	ctaggtggag	atggcggcgg	tgttggcaga	171960
ggaagactat	tgtcagaaga	aaatgacgac	gagcagctcg	acattggcat	atagacactt	172020
tcttcctcct	tatttgtagt	tgttggttgt	tgttgagggt	tattggcaac	tggcctgggt	172080
gtaggcggac	tagcataggt	tggaccagaa	aatgtttacca	gttttgtgac	ttgaggggta	172140
acattggcca	gatcgttaag	ggtagatttg	agcatgggtt	cagagatgtc	caggctcctt	172200
tctggagtgt	tgaaccggac	gtggctgatg	aaactggatt	cggtgttgct	cccgtcctcg	172260
ttcttcttat	tcttattctt	ctccacgggt	gagcaagaaa	tgcaagtagt	agttctgtcg	172320
atgcacttca	cgagcatggt	catggccagt	gcgagcccaa	tagtcatgga	gcagccgact	172380
gccaatccac	tcaggaaagt	gacgaggata	atgttgtcgt	tggtgataag	attgtccatc	172440
tcgagagatg	tttcttcctc	gactaccaga	cgagatatga	tgctctgggg	ccctgcttcg	172500
tccttttata	cgttcacttg	gttagaaaaa	acgatagtgt	agttcacagt	atttgtccct	172560
tctggtcttg	ggattggggg	tctgatactc	tgcccagcct	ccagatatag	gtggatagac	172620
cgagattctt	cccttgatgc	agtttctatt	ccatccaaga	tatcttcacc	aaataagttc	172680
ttatgcaagg	acaccagaat	attgaactcg	tgaacgcttg	acttgttgat	gatgcataat	172740
tcaccttggt	cgactgttat	acatactcct	tcaatagaat	cgtatagccc	ggggttattg	172800
gcacggtcct	cttcaggtaa	gaaaactgca	aatattgtat	taggcacaa	atctggcagc	172860
tttacagaat	gacagtaatg	tttatctata	atgtcaccag	aaaagtga	atctatcatc	172920
cgacactgga	gaaaggttga	aggaaaatct	ttccgcatat	tcttgagttc	ccgcaataac	172980
ttcttgtttc	tggagtgtga	cttttttagga	ttatttgttg	ccagacttac	agcatcgaaa	173040
atactttctc	ccattccttc	agcgggattt	tccatcttac	ttttgtagt	gttttcagtt	173100
cattaattgt	gtttcaggga	ggctataaaa	caaaactcct	acgcatctgt	tcattcagta	173160
gtggaccaga	cgtcgagatg	acgagacatg	gtgtgtctgt	tccaaaaggc	cgttctaggg	173220
atgttatcct	aggaaatgct	gactacactt	tctgtactac	tgacaataat	tgtgtcagtc	173280
tagacatcga	tttcaaggac	aatatcacag	accaaacat	tcagttattg	aacaagaaat	173340
tgggtaagaa	aacagcaaa	aaaataaaga	aggaagatgc	acctgaaaca	aaggaaaaata	173400
gtgacgaaga	catatacgcc	accaagggaat	tcgaacagac	aataaaagg	ctacagacaa	173460
aaaaagggtg	caccgaggga	aacgccatcg	cggccgcagc	tgccgctgcc	actgctgctg	173520
cggtagaaaa	ggctatgcta	tcagaaaagt	aaggaaaatc	aatggtcatc	aacagagcta	173580
gaatgagctg	ttctaagcga	gacacgtccc	agaaacagtt	cactgcatg	aagaacagg	173640
aatctttctt	cagtgttttg	atatttgaaa	ctggatcagt	gatagtgtc	gggcttcaag	173700
atccttcgct	tacaaaattg	tgtgtgatta	aagccacgac	tgatattgct	gatattctac	173760
agaaaaacat	cagtgtggct	aacgtgtcta	tagtgaatac	agtgtccact	tttaatagat	173820
tccacttgaa	ctttattcga	ctcgggaaat	tcttcgaaag	aaattgcac	tcttacagtt	173880
ataaccacga	aacgttcccc	ggtatgtttt	tcaagctg	agtccccgca	aagcctctct	173940

tgccctggaga	gactataggg	gaatactaca	caaaggttgc	aatgatgcgc	gatagtaagg	174000
atcccaattt	taaaatgtct	gactgggttg	ggataaaaac	tgcatthaaca	tttaaagttg	174060
ggaaaattac	tgtgctcgga	gaaggagaga	gtgggtgcgg	tgatgtttct	gtcgtatcca	174120
aattactatt	tggtttattc	cattacttta	tggacaacaa	cattaaaatg	tcccccaaag	174180
aagcacaag	agtcagagaa	aaatacggca	tcccgcatct	agaatggtac	ttgtacattg	174240
acatgttgct	ccactcctac	ccgtacgtca	aaccatcggc	cgagcaagtg	aaaaggggcg	174300
tgggtggacca	acaacatatt	tctgaagtgg	ataggacata	ctatggaaca	aagaacagta	174360
tggacgctgc	catgtctgca	aatttagtgc	cttcaaaaaga	agagagtatc	tccttcatta	174420
aaaaataaag	atcacacaacaa	ctttttggac	atttgtgtaa	accttcaaaa	gaaactactc	174480
gacgtgctat	agacacactt	tctttcgatc	ctataaaacca	agacaggtgg	tggaaataaaa	174540
atgaccaata	ttacggtaaa	gagagatgtg	acccgttttc	tggtgcacgt	ttagtgtctg	174600
tttctgaaaa	tacaaacagt	atgatgaata	gtcgcatttc	ttgtcaaggg	aaatggtggc	174660
tagatgaaaa	cgaatacaag	gataaacttg	atcatattgt	ggatttgtgt	acagaagaaa	174720
tagtggagga	atgtgaatca	aagggtttta	tggcctcccc	atttttgagg	aagcaccaga	174780
aggaaaaaat	accaacgcct	tatgttttat	tagcgagagc	ctgtaatcaa	aaaaatggta	174840
acaaaatgag	tattaacaat	aatagtaact	atttgtcggg	ttcaagtagg	gcgaagagga	174900
atgcaaaaact	acaggaaaaa	caccgtgtaa	ctttagccag	gttgaacacg	atgatggcgt	174960
cgtaccgatt	tttgaataat	tacatctcaa	cagacattgc	acctgatttt	gccaaagtat	175020
ttggtaatga	tgtatatagt	ttattacatt	taatgacaaa	cttgcctaaa	tcccggtggac	175080
atgctctaac	atacaacgaa	agggcccttt	caagtaatga	aagtacatat	aaaacacctg	175140
gaaatgcata	ctttagtact	ctatttgaaa	aatccattat	aaataaccaa	gaaactgcta	175200
ataaaggtaa	caatagaaaa	cgtaaatttt	ctcgaatcgg	acaagaaaag	agctcttttc	175260
tgtgcaacgc	gtgtggtgtc	aatttgaaca	agggtagtga	tgaaatcata	aagggtattt	175320
gtacaagttg	cgatacaaat	agtaccagtt	acatagagaa	tgcatattct	gacattaaca	175380
gagacaagaa	gattaaacgt	tttaaagcag	ctgcaaccca	tccgccagtg	aagcaagaat	175440
tggtagattc	tttatcctcc	tcttcactct	cttcttcttc	ttcttctcag	acgtctaaca	175500
agaacaatag	atgcacccct	agtgatttta	tagattatgt	gtacaaaattc	actgacgaaa	175560
caacaggtgc	tccaaagggtg	ggcttagtgt	ttaaaatgtg	tgatattctt	gcatccttag	175620
caagcaggag	agggatggaa	gatcgtccca	cagccaacta	tagaacctcc	ttacattcag	175680
ctactcaaaa	taaaaccaat	ttgaataaac	tattagtttc	tgctatcaag	gaaacaggag	175740
ccactgaaac	tgaagcacag	atattcaaca	agattatttg	tagtgaaaag	ggactatcaa	175800
ttctctgtca	acttgtggaa	aggaggaaca	aagacaataa	tgtcttcgac	tgatttgtct	175860
aagaatgcct	tccatgactg	gggtgtatca	aagacagatt	gtgaggtgtt	tgatgtacac	175920
tgtgagacgg	acagagattg	tggcgctgct	tgcgagaaca	cgtactctgt	tgacggaaaag	175980
gaggttacaa	aattctcttg	taaccaacag	tcgggaagat	gtgccaggag	tgtttatagt	176040
gcgtcttctc	tagaaaagagc	agccaatgat	cttggccaca	ttataggtat	catcaagaaa	176100
aatccaaaat	tggaggaaga	actccctgaa	tcatttttgt	ggtttatcaa	tcacaatgga	176160
ggagatttgt	ttgtgaataa	gcgagccgcg	tactacgaca	cgatgcactc	aagcataggg	176220
aaactggata	atgtggacac	tcttgcctag	ggtttagata	aacggatggc	ctcatcattg	176280
agagagcacc	tactgaggaa	gttggactct	atacttttac	aaattgataa	agttaaatat	176340
gaaaaggcaa	agaaatggat	attggatata	acacaggagg	ctggcaccga	agaggacaat	176400
aaagaagaag	aagatgcgaa	aaaagaggat	caatctctta	gcgttagtga	aattgtggat	176460
gttttaacgg	gcacacatga	ccctatgccc	ctgagggtta	gagggtttat	ccagaaaaaa	176520
atatatcctt	tgtcaagaaa	cgaattgaga	gaattagccc	ttaaggaaact	tttcctgaa	176580
gaaactacat	ctcctcaggt	tttgagttag	caacatgatg	tatctacgcg	tgaagattta	176640
tgcaatgaaa	gtatgaatgc	agggagggca	gaatccattt	ttagcgaccc	tgattctgga	176700
gagtacgtgg	ctacttgtgc	atgtctttac	tcggaatatt	taacagggcc	tgctgtgaag	176760
cacaaaacat	acaggtatgt	tatagactac	gacaaatgga	aaaggactgg	aagacctgaa	176820
tttctaactg	atcctgtact	tcatttttaa	aaggcagaag	ctgtgtgtaa	atcgacaaat	176880
ccaaacttga	gggcaattta	tagtccagat	aataaagggt	tcttgtgtgc	gcctgtagct	176940
gaacttgtaa	agacggcatt	aacttttagg	ggttcacacg	aaccgtctct	cattgtcgag	177000
agagatatata	atcaagctga	aaatctacca	tccaattcat	ttggtgtaaa	ctggccctat	177060
gtgaatctcc	taaatcgcat	tcaagaccag	tacacgtaat	ttgataaaaa	aagatcgggg	177120
aaaatgtctg	catctttaat	attggacgaa	tacctcaaga	agactgcttc	agccgttctg	177180
gatgtagctg	actcatttga	gaaaaatcaa	ggagaaaatcc	aatcacctga	ggaggctgcg	177240
gctctttctg	tgtctctcta	tggagcacct	ccaaaacctt	cagcttcggc	tgtggcctct	177300
atcatcactg	gagaaagaac	atctttaaac	gacaaatatc	tatcggataa	tgctctattg	177360
aaaatgtctg	ttgctcgcgt	tggacaagaa	aataatcgca	agagagccga	ccaggcagct	177420
gatgaaatta	gaaccatcat	ggaagatatt	acagggagtt	tgtccggtgc	gtacaggcaa	177480
tatagcccgc	tcgaggaaga	aaataagggtg	catataggca	tcatgaataa	caaaacgcct	177540
agcattgttt	gtggatatta	tacaatggac	acatctattt	cttccgaacc	tctttctcta	177600

acagattttc aaaacccccac tgtcattggc aatgtgacta agcggatgga gagcattttt 177660  
tcaaaggctcg actctgctag gtctacaaga ttcgacgctt ttgttaatgg tgttgcgaaat 177720  
aatatggata taaagtcata aatagattgg gcaaatatgg tagaaaatgt gatcaaatta 177780  
ccagatttcta cacctaaccac ttgttcagtt gacactattg tgtccagaga cgcaagtgt 177840  
gttaaaacag cagttaatga tatatacgct tctgttgga aatcttattg tctgctcgca 177900  
acacagctaa cctttatgag cgagattgaa aaactgcaaa aggctgcagt tgtatgtttt 177960  
gaggcactca tgtccgatac tagggagagg gcattcgtag agttcctatt ttacgttagc 178020  
tttaaggaaag atgcatcaaa taccaattca aaattgtttg ttcagaataa gctatcttcc 178080  
atgtctggaa accccagaca gcccataaaa ttggtagcgc gttctgctga ggaaacacta 178140  
ttcgggctct gtttcatgtt taaggtaatg cctccagaat tcatgaactg tatatttaac 178200  
ttccctacca ttcccccattc aacacaatac catggtctat atggtacatg ttaacccct 178260  
ctacttagaa aatacggttc ttcatctgaa aagtcctggg ctcattttga ggaaatttta 178320  
agcgaaagag ccaatgcagt gaaaaaattt ggtgtaaagc atacgaggat agattgtcta 178380  
gatgcagtag caaatctcac cggacctgtg tatgttctca ttttagatct tgtacttact 178440  
ctaagtgcgc agagatcgtg ttcaactaaa tttctccgtg aaattaagga aaactatctt 178500  
ttgtggaata ggtttgtgtc ataataaaaa tggctcagac atcaaagatg ggaactaaca 178560  
agaggtgttt tgaggaggaa gtggaggaaag aaaggcaaca acctttcaca aagaaatcta 178620  
aatcggaacc acccagtttt gaagacaaga gttcatccac atcttctaag aagaagagca 178680  
aatccaataa acacaccaag accaaggaag aacaacttct agaattcgtg aaggatctgg 178740  
agcggagcga ccccactgtt cctgatgaga aggtcaagca agaagttaa gaaaagtccc 178800  
ctgaagctat tgctgaaatt ttttcaatgt ttgggatcgc tcaagacagc aagttcaaga 178860  
gccttcttcc cattgaacgc ataaagagca tcaactactaa aattgttatc gatgcaatta 178920  
atcagcctgt gcgcaagatg ttggttgacc acctctatca ttttaaggag atgcagaatg 178980  
ttgtggagaa atataaggac gatagcgacg aaaaactgag cgtcattctt aagagtaaga 179040  
aatcccccaa agaatttgac ctctcctttt ccgattacgt tgatcgctt aacaggattc 179100  
tggttggtgt aattaagagg gtggccggag ctattgaaag taaggaaattg ttgcagagta 179160  
acagcatgat catgaacagt gttctgggtg ctgttggtgc caacattcct tacaacatga 179220  
agattaatat ttgtgtgttt ttgactaact ttatttgtac atttgctaat gatgatttgt 179280  
acacattctt tagggatgat gagaaatttg taatgagtc ggtacaaga tacatttcaa 179340  
aggattagaa aaataaaaga tgggtataaaa ttacttgtat ttttattcaa acaaaacctt 179400  
tatatttga caattcccac tttacttctt ctgtatttgc tccttgatat cगतcacatt 179460  
cttggagggt aattcaatgt tcattgtagc ttgcaaggct gcgccgtctt caaatttgtt 179520  
gcacacgtca atgagggtaa tttttgaaga tgaagattta atgtccttgc tgcagaagta 179580  
agtgttcgac atagtatttc ccttaatgtt tcttgcaata acagttggcc gaacagtaat 179640  
gtcgttgatc aagagatcga cgccagtggt gttgaggatc ttcaaagtca tgttagagtt 179700  
ctcggcccca gtgccagcgg gatcagtcct tggggctgtg acggtagaga tgacaagatc 179760  
agcagaaaca tcttcatgt ccttatcgga gagaccattc ttcatggcca cctttccaag 179820  
aggagtattg taggacctct ctccacgaat tgacattacc tttgccttcc tttgaattgg 179880  
gactcgcata atctgatcat aattagcgac gacgttctt ccaacacgtg tgttgaatac 179940  
aatcattata accatgataa cgattagagc aatgattgca atggacaaga ttgcaataat 180000  
tgcaacgtcc aggtttgtta ggttgccaaa ttccattttt ctttgtttta gatggaagtt 180060  
cttcccttac gtgttggttg gatccagcta gttagtctt ctgtagcacc atatacccag 180120  
aaagggtttg tttttaaatt ttaaccctac atcgaaccgg atgaagtga ccttgccgtg 180180  
atctaatttc agtaacgata cctcccacta cccctacttt catctccatc tctacccct 180240  
ccctactcct cccttcacct cctcctctcc ccctttactc gtattggctg tcttcatcgt 180300  
cgtcttctga attggatgaa gaattgtaat attttgtgtg cttcattctt ttcaattgct 180360  
ttgctagaga attgacgcta gatttggtat tcaaaaggct cataaaagtc ctccgtctag 180420  
aagggtgtga agattcttggt tcaatataca cactgttagc gctactcatg ttggaattga 180480  
tgtcatttga aaaagaaaaa gttcttttcc tactaacatg agaagataca ctgctaggca 180540  
cgtccattgc tgttgctgct gctggggtgg agggagaaac atcttgattt ttagaaggac 180600  
ggtacattaa gtttcgcata ggcacaacag atgtagattt tccgtgctta ccttttttat 180660  
tgtatttctc agatgcttga ttttagcttat attttatgca gtacacttca atggacaatt 180720  
tagctttctt taaaagtttg atcaactact cgcttagcaa gtgtttcctc ttgtccatga 180780  
aattgactag tgtatttaat gcattatcaa aaatagggga tctgtgttcg atgattgatg 180840  
agcctgcact gtatgctaca ccaaaccctc cccgccttg tgtctggaga tcaaacatac 180900  
tattcttgct gttattgtta ctcaactcgc aatcgcgtc accgaaaaag tggtttaatg 180960  
atgtacggtc attactgtcc ccgtatctta tattatcgta tactcgacga attgcttct 181020  
tcttgctctt ctctgaaaac atgttgccgt cttcacttct tttctctgcc tcaacttccat 181080  
taccatcttc atcctcttca tgcactgcct tatcaaattg tatactgttt aagacgtaaa 181140  
tgaggaggac agccatttta gaagaacaac tagaaatact atccaaaaga agaactttat 181200  
aatcttttga caaagtgaac tcttttgccc aatttaatag tacaattggt atgttcaaga 181260

aaattggttaa	ccttcccacg	tccatacata	gtttgttgat	gtgtttctct	atgattgtag	181320
aaattgcccc	gaaacaaatt	tctgccccta	tagaacctaa	ccccatttct	tccattatgt	181380
ttgcagattc	tttactcatc	tgtttttagt	tagatgaggt	agacaaatct	gatacatcat	181440
ttgtttcagt	ttgatgtttt	tcaaaatcct	cttgggcttt	gttgggtgtc	ccgaacagt	181500
ccactgatgc	cttggtcact	atgtccgaaa	gcatattgac	taatctagac	caagaaacag	181560
cacttgatgt	tttaaaggat	atgaggttgt	ttaggaacgc	cagtctttga	ccaagcttat	181620
acgtttgaca	tggttgatta	togtgcgtct	ctttcagtat	atttatcagt	tccatgtgca	181680
aaattgcttg	agtttgatta	ctataaaaatg	aagaatgctc	caccacctct	cctcctcctc	181740
ctcctcctcc	tctcctcctc	ccagcaatag	actcgtcgcc	ttcagcacat	actccaccag	181800
cagatgaaga	catggaagtt	tcctcctcgt	ttaattcaga	tatactttca	acctttttta	181860
gagaaggagc	aggagtcgat	ggtcttattt	tgctagctct	ttccccatt	atataagttg	181920
acgcgtatgc	tgctgaaaaa	agaggggttg	acatgatttg	cttctctctga	aacaactcca	181980
attttcatt	tgttttcctg	aacagctcgg	cagatttaat	gtctgtcacc	gcagcagaat	182040
ctaaaaatgc	cttcacgtgt	aattctgcag	cgatgatatt	tttaaggcgc	tccattactt	182100
tctcggatgg	ttttactggg	ttttctggat	cttggaaacac	aactttcacc	agttcagagc	182160
attgaaggtt	ctttgttgtt	tctagaagag	ttttaccctt	tgtttttaag	attatagact	182220
ccatagtctt	gtgtaatctt	tcttcggcct	ctttcccacc	taatgtgttg	ttaacctttc	182280
caaccactgt	actcaaaaag	gatggattgt	tgttgttgtt	tgaaaataag	gactgatttg	182340
taggtggagg	tggaggggga	ggaagaagaa	tattggttag	tttgagtga	ggaggttgat	182400
gaggtgggtg	tggaggtgga	ggaggaggag	gaggcatcag	catcgaatct	tggtccatga	182460
tgtctctact	ttcttctccc	atttcattgt	ctggaggaaa	agtcacgata	gatggaaacag	182520
gcggtgggtg	tatatcgttt	agttgggtcat	attgttcctc	acctccacta	ccaagaatag	182580
aaaacattct	aggtgctttt	ggtgaagggt	cctttatctg	ggggagaata	tctgtctctt	182640
tcatgatttg	agggaacaca	actgcacact	cgcactcttg	tatatctgga	gggggagatc	182700
ttcgaacctt	gggcgcattg	ttaaattgat	gcatagtact	tatttcttca	tcctcgagt	182760
tgtgccgaga	ttcatcttca	tattcttcat	attcttctct	ttcttcaata	tattccgtgt	182820
gagattgaac	agactcttta	gtttctacat	gctcttcaga	tttttgtgca	ggttcctcct	182880
cctcctcttc	ctctccctct	tcttcatcct	cttcttcate	ctcttcatta	tcattgccgc	182940
cacctgctat	tgaagagaag	aaataatcca	ttccatcate	attacctcct	tcactcatag	183000
ggctggattc	aactctatga	gagtgacgcg	tttcattttc	tattgcatct	tcactccttt	183060
cgggttcatt	tttttcttgt	tctataggtt	ctttttcttc	ctcttctctc	tcctgttctt	183120
cttctcttct	cttctctctc	tcctgttctt	cctcttcttc	atcctcttcc	tcttctacgg	183180
gttctatttg	ttggttatca	tcttctttgt	tcttctgttc	ttcacctgct	gatccgcccc	183240
tggcgttcac	attttcaagt	aaaaagttca	acatgggaag	aacttgccca	tttgccctca	183300
ctggcgaggg	ggtgttcact	atacttttcc	actggttttc	aggtataatt	gtcgcatctt	183360
cttgttgtgc	cgtagcgcc	aataacgcag	ggtcagcctc	atcttcttcc	ccttcacctt	183420
cattgtcate	ttcatattca	tctccttctt	cttctctcgt	ttctagattt	ccgtcatatt	183480
caccccttct	ttctcctctc	tcactcttct	cttctctctc	ttcctcttct	tcttcatcat	183540
catcatcgta	catgtcatta	gtgacatctc	tcacaaatth	actttgtttt	ttagaagatg	183600
gaggatcttt	atttcttcca	tttctaactc	ccgtgtcctc	atcttcatct	tcgtaatcct	183660
cctcctcctc	ctcctcctca	tcctcgttca	tttctcctc	atcctcttct	tcttcataca	183720
agttactata	atcaacatta	ttattgatat	cgctcctcgt	gtcgatatcc	aacactcccc	183780
caccttcagt	tatacgcaga	tttgatgccg	cttccatgat	gaaatttttag	tatacaatat	183840
tgtgttaacc	gtggaaaatc	aaacactaca	tttactaagt	tcctttcctg	aaaaaacgag	183900
ttacctctat	agggtaatcc	tcagggtgta	tattctatag	tttggctctg	aacgtgcttt	183960
tgggttttgt	tataactttc	tctaaaatct	actaacggca	agagcattga	cagttgagt	184020
ggaaggggtg	gttcagagta	agaccaaata	taaaatatth	tttgattgtg	tgaatttcga	184080
accgtttata	ttactatttt	agggtactag	aaaacgttgt	cagaaccaat	catgaggttt	184140
atccccagtg	tgataattgc	gcttatcgct	gcatttggtt	ttgcagctct	tcttactgtc	184200
aattcaaat	acctggatca	caatatcaat	aagggaactaa	atttgaccg	ttcccttcaa	184260
cttcggggaa	cattcacacc	agaagatata	gtcataaca	acagaattct	cccttccaag	184320
ctgagtgttt	tagaaagagg	gtcaatcatt	ttagcagaaa	tggaacaagta	caaaaatgca	184380
caacctacag	taaataaatt	tcaagagagg	aggaacattt	ctactcctca	acaacaacaa	184440
cagaccaccc	cctcatccca	atcatcttcc	caagttgaac	tttaaatctt	ataagaaaat	184500
gctgatttat	gttctgttat	gtgacgagtc	tcgcaccgac	gagaaagaag	attttaacaa	184560
cgatgaggaa	gaaaatatat	taaaggagga	agaagtttag	ggaggagaaa	aggttgtaaa	184620
tctcgtagta	gggagtatta	agatgatgaa	acctggttca	aaaatcaaaa	caaagtcacag	184680
gctctactcc	ctccttgcaa	gtgcgatagg	gagtagaaaag	aaagctgaag	aatatattga	184740
acgtctatac	aattcctttt	cttccatgac	gttgaatgaa	ggaggacgct	tggtctcagc	184800
gatttattgt	ccatcctaca	acaataaaaag	gataaaaaac	aatcgttcta	ggcctgtgaa	184860
gctgatccat	gcctccaggg	aattgttatc	tgaaactacg	gtgaggggag	aaatactacg	184920



gaaatctccc	gcttcttctt	cttcttcttc	aacgtcatca	tccacttctt	cgttttcttc	184980
aatttttttg	tttgtaacct	ctaattgtac	ttctaaaact	gtatgcgatt	ttgtaaaaca	185040
catacagtat	gaagaagata	ttaaccggtt	aagggtataac	ataatacata	tatctgaaga	185100
aaactatgct	tcaagatttt	ctaaaattaa	tagattaact	acatgtatac	aagggtataag	185160
taagacaata	aagatttctat	aaaaatcaac	atttatttgt	atcattttata	aaattccata	185220
tttttgatc	catttcgtag	tcgacgggta	gagatggctc	gtagaaagaa	gatgctgctc	185280
cttttaaaag	gttattggac	atggctatca	catacatttt	cttattgttt	tccctattga	185340
tgatatttgt	catgacgttg	ggagtggcat	tttttgttgc	tggtgtatga	caaacggcaa	185400
cattactggt	gttcttaacc	acctgagcaa	acatggctgt	aggggattat	ctttctatgt	185460
cctctgtagg	ggaagcaacg	ctcgtgggtt	ttatgatttt	aaattttata	aactttgtca	185520
caatattatc	tttaataata	tatgccgtga	cagacgttta	tagaagatgc	aagcggccgt	185580
ctaccaatgg	atattctggt	tgtacaacca	atgtggtttc	ttcgacttta	caagaagcta	185640
atctcgttac	cactgaaaaa	gataaacctg	ttcaatttgt	tagaggttta	gtccccagaa	185700
aaatgatgga	aaaatataga	tcggacttgt	ctcctaagaa	cgtgggggaa	tatattttac	185760
cttcagaaaa	agaaacagac	aaattgaaaa	gtgattataa	aaagggttaag	aagggttggtc	185820
ttttaactgc	cctgagtaat	ggcatgaca	gtaacaagag	gattataggg	ccaagggatc	185880
tgattagtag	agatgatgtg	aaggacaaaa	gttatgtcct	taagagattg	agcaaagatc	185940
cgctcgtcta	ctactcttct	gcaacctcta	aatacgttag	aaaattttcc	cctttcagag	186000
caaaaaaatt	catgacatca	acacagttgg	ggagtaagct	cgtgtatcct	caccctatac	186060
ggtaggttac	tgcttttgta	ctacccacgg	gtacatgtat	caacaaagca	tacggaatgg	186120
ataatgagga	tctacacact	tggaaacccac	cctcttcttc	tgtgctcgtc	ccagactcta	186180
ataatgatag	attaacagta	gaatgtgcta	aaacggaccc	aacacataga	atcggcatct	186240
acggcttttg	agggtctgat	gataatagac	gtgcaaaaga	agaagggttat	gtagaaatgt	186300
tgttatgtaa	ttgtgacaac	cacaaggact	tgcttaaggc	tcctctaatt	acagagtatt	186360
ctacaaatcc	aactgaaatt	caagtagatg	ttgctgcaaa	acgtgtttta	ttccctgccc	186420
ctgggttccga	gcctgtaaaa	tcttcccaag	tgctcatcaa	tgctcatcaa	ctagacggag	186480
ctactggcga	gcacgatatt	tcccatgagc	ccgtgaagct	atcagatacg	ggtgactatg	186540
cagttggatc	acccattgta	ttcaagccag	tttatggtag	atcttttagta	aatcttccag	186600
aaacaggatc	tcctctggca	ttgaactgcc	cctgcaccga	caaggctgat	ggaatatatc	186660
aagtcaatca	aaagggaggg	atattatata	gagatatggg	ggggtatcct	aacgcccaacc	186720
ctgtggaagc	tgcatcactt	tcttctctcg	actcttcttc	gtggttgaca	actggtaaca	186780
aaatatcttc	tgttacatgt	gaaggagaaa	aaataaagaa	aatttgttaa	tcatatgtgt	186840
agttttatta	ccactaaatt	tattggtctt	cttggtagctg	tttacactag	ggaattttac	186900
tcttctctca	tctcaaaaac	ttttcaaaaa	ttttctggg	tcgctcgagt	ttagagggtg	186960
gaccgctggg	tcggtctgat	gtcaagtttg	gagggtggac	cgctgggtcg	agccaatgtc	187020
agattgcacc	agaaatgaca	gagctccaga	aacgtacatt	aactttatac	tgtttctgga	187080
acatgtattt	ctggagactg	acacgtccag	aaagggtagg	gcatagtcta	ctggtttcac	187140
tagggaattt	tactctgcct	ccaccttaaa	aacttttcaa	aaatttttct	gggtcgctcg	187200
agtttagagg	gtggaccgct	gggtcggctc	aatgtcaagt	tcggagggtg	gacctctggg	187260
tcgagccaat	gtcagattgc	accagaaatg	acagagctcc	agaaacgtac	attaactcta	187320
tactgtttct	ggaacatgta	tttctgggca	cggacgcacc	cagaaagggtg	aggctgttaa	187380
cacccttaat	ccactagaga	attttactct	tcctccatct	caaaaacttt	tcaaaaattt	187440
ttctgggtca	ctcgagttaa	gagggtggac	cgctgggtcg	gccgaatgtc	aagttcggag	187500
gggtgaccgc	tggttcgagc	caatgtcaga	ttacaccaga	aacaccagag	ctccagaaac	187560
gtacattaac	ttttacgtgt	ttctggaaca	tgtgtttctg	gagactgacg	caccagaaaa	187620
gggaagggtg	taacctacta	tttacactag	ggaattttac	tcttctctca	tctcaaaaac	187680
ttttcaaaaa	tttttctggg	tcgctcgagt	ttagagggtg	gaccgctggg	tcggtctgat	187740
gtcaagttcg	gagggtggac	ctctgggtcg	acccgatgtc	agattacacc	agaaatagca	187800
gagcatacga	aacttttacg	actttttacg	tgtttctgga	atagacgttt	ctggtcatatg	187860
acgcacccag	aaagggaagg	gtgtaacctc	ctgttttcgc	tagagaattt	tactcttctc	187920
ccatctcaaa	aacttttcaa	aaatttttct	gggtcgctcg	agtttagggg	gtggaccgct	187980
cactcggctc	aatgtcaagt	tcggagggtg	gaccgctggg	tcgagccaat	gtcagattac	188040
accagaaacg	tttgttgctc	cagaaacgat	aacacacatt	tctggagcag	tagttagtta	188100
tttctggagc	acgttaaaat	aagtagggag	aataatacat	aacattatat	tttcaattcc	188160
atttttatgg	ttctatccat	ctaaagggtg	tagaggaaat	acttttcattg	tagtataaga	188220
atccttactg	aaatttttca	aatcatccaa	agagaatata	atctttccag	tataacttag	188280
agggttcctt	ggtgtagctg	ttttcgtgtc	cctggcgaga	cggtacttat	tattgcttcc	188340
catctttaaa	tcttcgcttc	tactcctctt	catagacctg	aataaggcta	tggaatgaaat	188400
agggttcttt	cctacagggt	cgacaataag	tcttcctata	gatgcgttcc	gtatcaagtc	188460
ttgcttggcc	ttcttcacat	tcctgtcgga	tgcggtttta	ctcccactag	ttttccatat	188520
ctctgattcc	gtttgcatct	ctctaaatgc	tttccagatc	aatttttctc	tgtaaacatt	188580



ttccactttg	acataattat	tcttcaacat	gttatccact	aacatcttgg	atgaaaatgc	188640
agataagaga	ggtaagggcc	tccctgggtac	aaaactagt	tttgacgcat	caatcacatt	188700
tcttcgtgct	ctaacagcat	tccttaaagc	ccaaaagcct	gcaaaggata	ataatgatga	188760
tgtattttca	tctgttgga	catttcccca	taagttatgt	gtaggaaact	tcaaactctcc	188820
ccatcttgcc	aatagtaaat	atactgctct	gtcgaaattg	ttcgttattg	aaggattgga	188880
ggtggctgca	gccgcgtaca	acaggtagaa	agaaagggca	gcaaaccctt	tagatacatg	188940
gacatatttt	gcagcttcaa	acacataccc	tttcttatcc	actaggtgca	tgttacgcac	189000
ttcttcgtcc	tctctttttt	gtttcatttt	tccttcaaaa	cctatatcac	cacctaacc	189060
tccccctctt	aatagaccgc	aatctgcaga	gagtatctca	accatcaact	cccctaacc	189120
attgacattt	tctgtctcct	tattattacc	accaccacca	cctaaagcat	cgagtactgc	189180
tttccagtag	gtctctagtt	cctgttctcc	catagacggt	ttactttggt	cctttaaact	189240
gatggtaaaa	gtgtctagag	attttgttat	gaaaccagat	tcacaacgct	ggcagacgaa	189300
taaagaatgc	atatctttca	aaaacacttg	aagaattaac	ctgcttttca	ctgcagagct	189360
attagttttc	tgtgttagcc	ctccagagca	taaaataaat	gcattccata	gcacatacat	189420
tgaaaatcgg	gcagctgagt	cgggatcaag	aacgcgggta	acagagtagt	tggagaacat	189480
aacttgtcta	ttattgacaa	gaaaatactc	caaagtttct	ggtgaaacaa	tatcgttaaa	189540
cttgttacat	ctcttgattt	cacgttgaag	agcttgaagg	gcggtagggtg	tgcgttttagg	189600
ccctaaaatt	ccgtctatcg	cctttggaag	atatgggtgg	tccctaaaga	gattctcagc	189660
agtcatactc	gtagttttta	ttcgttctct	ttccctctcg	acccattctt	tttccctttc	189720
tgtgacactt	tcggtgggca	tctgcagatg	gggattgttc	acataatttat	ccagttttagt	189780
tgtcaaaggga	tttggttttag	cgtttctggt	cctggacagc	actgccctgt	actctgcgtc	189840
gatggctgct	gataatagta	ccatgatttc	cctccctaaa	agagcttcat	ggaaagaacc	189900
taccttgggg	gggtagaatc	cttcctgtat	tacagaaacc	atgttggtta	aaacagtcga	189960
tafagttaga	acaacataag	attgtccatc	ttcttcaactg	actgtaactc	catcactaaa	190020
ggacccttca	ataaagtctt	ttatcctttt	ttcaatcatg	tcagcagcgc	gtccgtaactc	190080
taggtgagga	ggcatgggag	caaagggatc	taaacccctc	tctttcattc	tagaggcgat	190140
agattgcttc	catcttagaa	tatcacaaag	agtatatcct	agaaatagag	caatggctct	190200
ttttgctcgt	cccattgcca	gatcggccac	cgttgaattg	tttctgttgg	ccaacatttc	190260
tgaatcaatt	acccatgaag	gttcattagt	atcacctcta	gtggaataaa	gaactagatt	190320
agctgctgat	ctaaacacac	cgtccataat	attctcaaa	gcattcaaaa	ggttcaataa	190380
tggtgcttgg	ttcaaaaaag	taaagtcaca	tagttcttcc	gctgcagttt	cggccaactc	190440
ccaagagggg	tcaattatat	gctctctaac	accttctata	tctctgtaga	cactccatcat	190500
gacggcatct	ttagataggt	gtcctttggc	taatcttagt	cccgaattaa	aaaattctgt	190560
cgtttttattg	aaccacgtgg	gtccgaatac	gtcagaagaa	ataacaacct	tcctttgttt	190620
ttcaggtgta	ttttgtaaat	ttgaaatggc	agcaactagc	ccttccgata	cataatttag	190680
tcgtttttca	tcggttttag	tttctgtctac	taatgccaga	acatagtcct	ttgactctgt	190740
catgattttt	gtggtgctgg	taaagtagtt	ttgttacacg	ctgcaatatc	ttcgacctta	190800
aatgtcttcg	gttaaaaggga	tatttatttg	ttggtactgt	ttcgtcaag	gctgaaaaat	190860
aatttcaaat	atacaatgga	gtacatggaa	gaaggagaca	tcgctgaaag	gcgctcagaa	190920
ggtgtcgact	atattctgga	cgaaaactct	gcttgtgtag	ttaatgtgaa	gagtatccgt	190980
aacaggctcg	gtgccatgga	cgccgaggag	gcacagtagc	cacaggacat	ttccgccccaa	191040
cttgtcacc	atattatccg	tctggcccac	tgctccgaat	ccaacaagat	taaggatacc	191100
attgccagta	ttgcgggtct	tttcatcaac	aacatctttg	acaacaattc	aacaaagaac	191160
aaacttaaaa	cgtataatca	attcaaggca	gagtcacaaa	acaagtctag	cgttctcaat	191220
atctttggct	ctctagatcc	tctgagtagt	ctttctagct	tcatgggttc	tgatccagca	191280
aagagtggag	gggaaaattt	ggacaaatct	ttgggtgtgc	tctttgaggt	gcttcaaaaat	191340
tacaaccctt	gcaagattga	cgatattgtc	cttctggaaa	tgtgcccatc	caagtgcgcc	191400
gcctgcaccg	gtctcaagga	agccatccgc	caggaacaac	ccatggaaagc	aatgttggtg	191460
gtattcaaat	glatcaacca	taataggttc	aattttggaa	gcgacataaa	gtcagcatac	191520
gcctctgaaa	catgcatgag	atactctcag	gacgaacgcg	cagtcgttgt	gcctctcagg	191580
agtatcctcc	tcggctgcct	cgacagggat	gatccagctc	atactctttc	ctctttcggg	191640
gatactatcg	agtatgctga	ttcagataac	gcttgggttt	cttccctgtt	tgagccgtc	191700
tctagaatgc	ctatggtaga	cagagccggt	attgctcact	ttacgtgta	cacaatgtc	191760
agccgacata	ggcgagtatc	tggagacagc	ttcaagcagt	ttgtctatac	cgtatttggt	191820
cgatgattt	actctgcgat	tgaattttt	ttctgtgata	ctgaaaattc	gtctgtagaa	191880
tgtgatggaa	agcacttttt	gagctatgtt	aatgccatgg	ttaacgtatc	cgtgctgggt	191940
tctacgttta	acgtactaaa	agcctaccgt	tcatgggtgg	tggatcaagc	atccgtcgca	192000
ccggttctag	acattatttc	cggaggatgg	aagaagaact	acccctcacc	tgaccacatc	192060
aagagggtgg	cgtacgacat	ctctcaagtc	atcaatcatc	ttgcatcacc	ttctagaatg	192120
gttaaaggta	acaacaaggc	tagcaacggt	acatctggcc	tggatagtag	caggtctgtt	192180
cgtcaagcag	aaaaatatat	cccgtttgga	atacttgaaa	ataaagcagg	gtatggtgta	192240

ataaacattg	cgaagcaca	catcagccgt	ccagcaagag	aacaatccaa	cggaaggaa	192300
tttaattgca	acgctttaca	cattctacct	tcaattaagg	gctgtgaggc	acttggggca	192360
caaaagggga	gcgcagatca	aactgtcaat	gtttttgata	attttgtcgc	atctcatatg	192420
gatattgcc	tgaaaaagca	gggggtcggg	aagattcttg	gactgctcac	tagcatgatt	192480
gacaggcaag	gtctgactac	ttcatccct	agtagtgaag	cggaatacaa	gaagagaatc	192540
catgatttca	caagatacgt	catcttctct	tcaacaccca	tcaacgacga	actagtcaat	192600
tctcgctgta	ttcttcccc	ttctaattgt	ctgaactccc	ctatcagctt	gagaaatatt	192660
gaccagaat	cagtccccga	cactcgattc	cactttctgc	tcatgatgtg	gcagcgcca	192720
aatatcgatg	aacctaattct	ttctgctcta	actacaagtc	agctagaatt	gttgcttagc	192780
aagaacccaa	aatgggacaa	actcaccacc	agagcgttct	tcaatatcga	caggatcaat	192840
ttccagatgg	cagacgctat	cattaagaac	gtttctggaa	gcggcttcc	agatgggagt	192900
aaaactgcct	cttcttcttc	ctcagcgctc	aaacttttcc	aaactctcag	tggtgctgaa	192960
tgactgcaa	agcagctcca	aagtattcgc	aaattcattg	gagaatctat	gcagcatgta	193020
caaaaggaat	ggagtagtgc	agtaacaat	gggaacagag	gagtagaaaa	ttatgacgga	193080
ctcaatgctc	agttctctga	agaactgttc	gagctgctct	acaaattgat	catcgaggag	193140
gatatgcggc	catccagcct	gatcgctcca	tctgaattct	tgagcaacta	cgtcaacgcc	193200
atggatgaac	ttcttatcag	agctaattgt	tcttagatag	ggtttttatg	aaataaaaca	193260
aatataaatt	atatatcatg	caattttatt	tatacttttt	tttgatgtg	atacaatatt	193320
tttagtggtta	tgacagtgc	accattatat	tattatctgt	aataggctct	ggtaaatatt	193380
taatgaaag	aagattaggt	gcacaatcta	ttgtcataaa	aatgtccagg	tcaatttctt	193440
caacaccttc	ctcaaagtta	tagaagaac	ttgtttcatc	atttttatta	gcaataaaca	193500
agtacgtttt	ttccttagct	gtgcttgag	agcttatcca	atagctctgat	gcctttttta	193560
cattataaca	gttggggagt	aaactacaaa	aacagtcctc	tgttttgttt	gtagcgtata	193620
ccggtacacg	gttaccttct	actacaaatg	aaaactctat	ccgggctttt	tcaatacgtc	193680
ctcccacagc	tgctctacct	tgtttttgta	gcacgggttc	taatccaaact	tgtagagaat	193740
ccagattcgt	tgctgcacta	ataacattaa	atgtcctctg	tttcatgttg	acatgtacag	193800
acattcgtcc	ttgccaagtg	cgcatatcac	gatcactgat	aaaacctcct	cgtatattat	193860
ttatcaccaa	ttcctttgag	taccgggcaa	ggtaatcagg	tgtaggttga	ggaggttggt	193920
gttgcttagc	tagttgtgaa	gaagggtgtg	ttgtcaacat	caccatttct	gcgtctgggt	193980
ctgttgatct	ctgtaggctt	tcatcccat	tttcatcaga	aggatcaact	gttactgtac	194040
caaacataaa	aatattgggt	aagtctatta	cgagttgttc	gtaagtgata	ttggtagatt	194100
tttgtgcaac	aacttcatcc	atcgcttcc	tgacttcgtc	atgggttcgtc	cctatgagat	194160
cgaacaagtt	ttcatcagca	attgcctgtc	cgacatcggg	gacgtttatg	tcaccttcag	194220
ggattgaaac	ttttccatct	gttattttat	cctttattaa	ccatacgttt	tctgatttgt	194280
atgtgtcaaa	ttcctgatct	gctaatttgg	tgaagaattc	atcctcagct	ttttcaagag	194340
ttcttgcaaa	atgctctctc	gtttgacgtt	gaagcgtgtg	ctcattgata	acatcaactg	194400
ttcctccccc	tctctctcca	ttattattat	tatcgtcgtc	agttttttca	tcactcgtcag	194460
tgtatttaga	gtctaattta	tatttcttac	tcttttttgt	tttggcatth	gaatgtagag	194520
ttcccttccc	tacgcccag	atagcaaa	agagggcaat	agaagctcct	attaccaaaa	194580
caataaccgc	aaaaacaatg	tatattcctc	cattgtttga	aagtgccatt	tttaaaccct	194640
tcaattctta	tctaaaaaac	aaacagattg	aaatctatgt	ataaatcatc	actcgcgttt	194700
tcgatttcag	gcatgtgaat	tgtaatgaga	gaggccgaat	cctcggatgg	gttgatttatg	194760
ccatttgat	catgactaat	atatatagga	tattttctct	ttagataatc	acctatgta	194820
tcagaagaat	cactatttct	tagatttgat	aatatcacta	cactttttgg	tctgtttaca	194880
ataccagcga	acgtggattt	gcggttaaat	tctaactgta	gagttttggc	tgaagaatct	194940
atthtgaaac	ataaacttaa	atcaattaaa	tccccttgag	cagctccagg	gggagtgtat	195000
gataacatgt	gtttatcggt	tattggtaca	ctaaatgaag	ttgaagagtc	ggtaagggca	195060
atagtattgt	acttgaaaga	aatgatgta	tgaataaaac	caggtatata	tcttctccac	195120
cgctcctctt	ttaaaatttc	agttatgaaa	tcttccctgg	gttccatgat	ccgtctattc	195180
acatcgtata	ctttttccat	aaccactggg	attcctttct	caaaaaattgc	ttcacagata	195240
acaggattga	aagcgtcttc	gtaaagatgt	tcaaaagtca	ttacattagt	taaatggcta	195300
ttgatttctt	gccttacttg	atcctctata	tattttatag	aggcattttt	tgctaccgaa	195360
taggcaattg	cacctaaagc	atactttaat	tggtcactct	ttcttgat	ccaagaattg	195420
tcattggtgag	cagctcccaa	ttgagcctcc	actgaagcga	tttcagcttc	agtcacagca	195480
ggctcatctc	cgttagacga	cattatttac	tctcctttaa	aagcagtgat	tgcaaacat	195540
atctcgtccc	ttgtatcgcc	tctttttata	cgtttaacag	cgtatgttgc	agattctccg	195600
tttagtatat	gggtgtgttt	atatctagat	ttacatacaa	tatcaatata	tttactcttc	195660
ccttcaacaa	tcacattaaa	gaatatgact	acgcgttctc	ctgttcgatt	aatgcttca	195720
aagcttagca	cgtcattaac	tacgtcacta	cgagacacaa	gaatcactgc	atctacatcc	195780
tcatcattta	tggaacgaaa	caattttgcc	gttattttta	aatctcccaa	gggaatggag	195840
aaatcgatcc	ttgtaaattc	tccatcgtca	ccaccaattc	tcaaattgta	cgtagcaaca	195900

ctacaccgcc	ctacttgacc	agtttcttgt	tgaatttttt	cgtctatata	tgtgcaagat	195960
attggggggcc	gataccaatg	tacaagattt	tgcgttagtt	ttcgttttagc	caagtaatca	196020
gttattattt	gtctaacatc	tattccttgt	ttttcaattg	cctttaaaac	acaatccttt	196080
tttatgtctt	ctaggcgaga	tctcacatcc	agttctgcat	ccttcatgta	aactctgtct	196140
ccatgtctta	cagtggttctt	caacaattcg	tttatgtgtt	tggttatggg	gtgtatcaac	196200
aattcagata	gattagaaac	aacacgtctt	tctacaattt	tatcaaggat	gaggatcaac	196260
ctctcatcgc	ttatagttgc	gccattagac	atgctgttgc	tacttgcctt	tggatatacaa	196320
catcaacagg	tgtaaaaaac	atacaaaaga	aataataaaa	atacttttagg	ggaagaaaat	196380
gtttagaagt	attttcaacc	ttttattgtt	ctggggcgaa	gattatatac	attcaatctt	196440
ttaacgtaga	cctttcttcg	tcttcttctt	actcctactt	ccttttctcc	tcctttctgg	196500
tcctggaaat	ggaagctggg	ctcggtaact	ggagaagtgt	tgttgggtgt	agtgcacagat	196560
attaccctct	ctatttttgg	tctcttgagt	acaatttttg	gttttggttt	taattgtact	196620
gtagagggag	ttttctgtgt	tacccttata	gcctgtttca	ggaacaaggg	taggtgtcta	196680
taccaagggg	tagccattgc	tcaagtgatg	ctccaccccg	tgcttttccc	ccttatatac	196740
aatttctcac	gtggtcaata	aaggaaacac	aaaaaatatt	catcaattct	tttatttgat	196800
caaagaacat	gttttacaca	gtttgggcac	agataatcag	ggttaagtct	caaaccccat	196860
tggttcatta	caatgtactt	gacaatatca	gaatggtcag	atttttgaga	agcatatgga	196920
agagctaaat	tggtagatgt	ctaaagaca	tgcaacgggt	tattcacaa	cataggcaga	196980
aacatgggaa	cagatagatg	agaaaacttga	ttctcatccg	caatatcctc	tgtatttgcc	197040
ctcttgtggg	atgaagagga	caaaaacaca	gggtatttca	gattactaac	catcaattgg	197100
tacaccatac	aggctaacat	tacagcaaca	taatcaacac	cagttttatc	actctttagt	197160
gtttttaatg	aggaaagtct	cctcttacat	tcagtatact	ggagagccat	ttcaaacaac	197220
atgtgtaaat	ggtggcaaga	atacatcaaa	tccttaacat	ccattgaacc	ccaggcatca	197280
cacaaatggt	ttgttagtga	agaaccaact	cctattaatt	ccccctctt	atcatatcct	197340
acaacatcca	tatcaggatt	tggtaaactc	ataccaatac	aatttgtcaa	atttgatggc	197400
ggcctattct	ttgtggcagg	agagtgcac	ttgatgttaa	aatctctccc	aaagaatctt	197460
gtggtcttaa	caaagggcat	ttctacaaat	aaaactgaat	tgagcatgct	atttagttga	197520
gcccattgoc	cttgtctaga	acgagcaata	ttcatagcca	ttgtattcaa	agatttagga	197580
ttaatctggc	acatttgaag	aggtgatggt	aattttattgc	acatggactc	gtaatttgct	197640
ggtttctttac	ggcgcaattg	ttgtctctca	gcatacaca	tattgtcttc	ttctacttca	197700
gtgatagtag	cagaagaaga	agaaattctc	ccgtaatttg	ttgcagcctt	agcacaagaa	197760
ctcattgaag	tgtacaaatg	gaaaaagggt	ttagtattct	cctctaaacg	ggaaactgat	197820
tttacgtctc	tcaattctag	gacctgtttt	ctgatcaagt	ttttcattaa	aactgatgga	197880
agaacggatg	atacgtcact	aattctatcc	ttctttttgt	tgtcactgga	atgcccacta	197940
aagtcattcc	atgctttctt	gtgatgatta	aattcgtgtt	gacgtgtgtt	tattccatgc	198000
tttccaaatt	tgatacatct	ttccatcatt	aaagatgaat	ggataactt	catctctcta	198060
tccaaaagcc	cgataatttt	cttaacatcc	tcattcttat	tctcaaagac	aaatgttgta	198120
tcacaaggaa	aaacaataag	tcttttagac	atagcttcgt	cgacaaagaa	tgagaagatg	198180
taactgttgg	acatcataat	aggagacaca	gtaatgctgc	tttttgccgc	ctgttggaag	198240
atgcctctaa	tcatgacgct	gttttggggt	gaagtcatat	tctttaataa	actggaggga	198300
aattggccca	gaagcatatg	tttgggtata	gaactggaca	catcattctt	ttgggggatg	198360
gccttagcga	tttcggtaat	aatggaagaa	gatccgtcac	tgttatgttt	ttggagtgca	198420
gacaccaatt	gccttctttt	aggcgtatcg	acattgaaac	aagcctcttt	attactgtct	198480
cctccaccac	tagagttaga	agcaaaggaa	aattgtgaac	tttgttgcc	attttctcca	198540
aaaacactta	aaaagtttgc	aatatcactg	ctgttatcgt	ctgttttagg	taaagaagac	198600
gtattttttg	atgaattaga	ggaagagtcg	tccttttctg	cagaaagcaa	atttttatcc	198660
atacacatgc	gaataaagga	tccagaattc	ttagccgaca	tcttatcctt	ctcaatacgc	198720
ttctttaagc	aagaaaggac	ttttctcgac	tcagaagttg	aagttgacag	aaccactgaa	198780
ccatcagaag	taaatccagg	aaaactatat	tttgacggtt	tcttaaccac	atcgaataaa	198840
gatgcgtcat	aacgttcgta	catgttcata	aagtcacgat	ctctatccac	taatagtttt	198900
gcagcttctg	ggtcctttat	tatggacgat	aacttgcgag	aaatagtctt	gatgttacga	198960
atactgctaa	tattaatatt	cgacagagta	gggccagaa	gagccttctc	ggcagcatca	199020
tcgacagcta	caaagtgttg	tttcttggga	gggggaagta	aaactgggta	gtttgttttt	199080
gaagatcat	cagaaatttt	tccagtgtaa	acgcaattgt	acgcaatcaa	tacaccaggg	199140
gcggatgtat	taccatcaat	aactgacttt	ttaacggccc	cgttagtctga	caggcaatta	199200
tccccagggt	attttttaat	ttcgagcatg	tcctgggcag	acaaagatga	cgtgatcatc	199260
tcggaatacc	tttcagtggc	agggttgcag	act			

atgcacttca	aggcagtttt	tacttcggat	ttagagaatt	tgccttcata	ttcगतaggt	199620
ttcttacagt	gcctgtacac	agcatcggtt	tcgttaagcc	aaggagaatc	tgtgcagtct	199680
ttaatagaga	aaggcatggc	gcctctatgg	agcatattat	acacaatatt	tttctcttta	199740
aaggtagttg	aaacaacacc	agaagaacaa	ttccaccagt	gagcttttct	ggcaaagaaa	199800
gaaatattga	taggatcctt	tatgcgga	ccattttcgt	catttttacc	gtcgtttctc	199860
tcaatttcct	cacattctac	cccttcatct	tcaatttcgc	cacctctttt	acgttttttt	199920
gtatcattac	aagcattttt	cctattcttt	tcgtgtttga	gttcagaaat	aaaatcgta	199980
ttacacaaat	atacttttag	ttttgattcg	gtcattaaac	ggtaaatatt	actaaaaacg	200040
atcttagagt	ttcctccgtc	accgtacgcg	tttcttgctt	cattgatgtc	aacactattc	200100
atttctcccc	cactgccgcc	aaaatcgaca	ttaccacttc	tggaaagcaga	ctcgtcctta	200160
tcgtcttcgc	tcgatgactt	ctttgagcca	aatgaacctt	ggtggccaac	ttcgtcaata	200220
atcacgatac	cctttttgcc	agcaaaggaa	gccaaatttg	cttgagtaga	tgaagaagaa	200280
tccccagcat	tattgagagc	cgtaacgtta	atatattgtaa	acctttcgaa	ccaagtcctc	200340
ttacacaaat	cgacaagagt	ggtctttaaa	ttgtttccct	ttgttccac	aaatacaaca	200400
gcagtttttg	tggcaatatt	caaggcaacg	gaacaaagag	tttgaaccat	gtggtgggct	200460
ttctctccat	ctcctgaagc	aatggctgtg	cacatacctc	caaagttcat	taggccacgt	200520
aaaagataca	cgacatccat	tctgggcatg	ccagtttttt	ggtcaacaca	tgagatgtaa	200580
cattttctta	gcgcataga	ggctgtagtt	gtagaattaa	catcatcctt	ttgcttcctc	200640
ttcttattac	tactactact	actactacta	tgttttgaag	aagaagagga	ggaggaggag	200700
gaggaggagg	aggaagaagc	cgtttcacaa	tcgtagtggt	ctttagcaag	ttcgtataaa	200760
attgataaaa	atatataatc	ttcatcagca	ataaaaattg	atggagggtt	tagagaagaa	200820
ctgaatgctg	tttttgatac	aggttcgtac	tttacaacgc	tagtattttc	cgtgttttct	200880
tcgtttctcat	cctcatcttc	ttcattttcg	tcacatcatc	cctcattttc	atcggtttct	200940
tcctgatctt	cagccataga	ccaaaagttt	ttgttcata	tactgacaga	gtcggatttt	201000
ttcatataag	atacgtgttc	gattaaacaa	agtcctctac	ccattgtagt	gccttccatg	201060
gacgaagcta	gagcagcaga	aataaattcg	gttgagaata	aagaattcaa	aataacgtgt	201120
ttttctgcct	ttaattttaca	ccttgatata	atgtccgtga	ccaaatttat	cccttcaagg	201180
cgctctccta	gaagataagt	accatcaatc	aaaaagttac	tgttattatc	aacgctaata	201240
caggcagtg	tttcagctaa	cctgaaggga	attgctgtac	cattactaat	aaacgttcta	201300
gcatttccca	ttttttcaac	ttcagccata	attttagaaa	tgagagcagt	tcctgcattt	201360
gtaatacaaa	gacgtatatt	tttggtcttt	ttgagcatat	tcttggcagg	acacactgga	201420
ttagtataaa	atgacatttt	gtatgcttgt	tcgaaaaaaa	tattctgctt	gtttagtctt	201480
gacaaaaaat	cgggacagta	tctatcgtgt	aacacatcgc	cttgttctga	ctcattgtca	201540
aacattgaag	gagttaatcg	ctcgtgaaa	catccccgt	ttctaatttg	gagagtagac	201600
tcgatcgctt	tcttgttatt	cttacccttt	gatgatgaaa	caatacaggc	ccaatcagta	201660
agaatattgc	gggcaaatac	tcctcctgtg	cctttgttca	ataagaaatc	gcaacacttc	201720
ttaaagattt	ttgttctctt	aggagcgaca	aattttaccct	gcacagggga	gttaaagaag	201780
gaattatcca	agttagaaac	cttatctgtt	cctgtaaaaa	agttaaaatt	atccttctta	201840
atggccagac	tagattcgtc	cagacttttc	ccattaatga	cagaccgcat	agaaaattac	201900
atcctcttag	catccattga	atcttcttgc	agaaggcaag	ttttatctgt	accaccttga	201960
tcgtcatcat	catcttcata	gtctgcgcag	ccagtatcaa	tgccagcata	tagaccagaa	202020
tggtccttat	tgaattgat	gacacgaagc	acgcgcttat	ggccatcaga	gttgggtactt	202080
aaaaacacgg	cagttttaag	gatactgaca	atttcaattt	ctgatgaaac	aaagtgtgga	202140
catttcttag	tttcttcttt	accaatgaaa	cagtaatcat	tgtcttgttg	ccgataacaa	202200
gatttgttga	aaaaatctcc	tcctcgtctt	atatgtgtcc	ctggtgtaaa	caacactgaa	202260
caactattag	tgatccaaga	cgtacagaaa	ttaccctcgg	gatctaaaca	tgaagacaaa	202320
acttcacggg	cgtaaacagc	cttagccaaa	ctagctgcag	aaattttttc	gggagaagga	202380
tcagaggaat	tattgtcttt	agatttagca	gagaaagtgc	ggtgcagatt	cataagaggg	202440
aaagtgtcct	tcagtgttg	gccatagtct	tccacactca	ggaaaccaga	atggtatact	202500
gaaagtggag	ggtttgaatc	ggtaacgcca	catggagcat	tattctttgt	catttcaaag	202560
tggtctattct	ttgaactatt	gggatgaata	catcccaggt	tacacaaaac	gctaagtgtg	202620
cgctcgtaca	atttaatcca	caaaatgttt	agatttttaa	acagcaattt	tttaagcaaa	202680
actatctggt	tcttagggga	cataccattg	ttacagttcc	acatcttacc	caaactttta	202740
taggtgttga	tattggatat	tttttggtgg	gtaaagtatt	gctgggagaa	agtctgggtca	202800
aatgaagatt	ggttagaaga	gcccagata	acgtacgcgt	ctttagaatc	gttaacaatc	202860
ttaatgtttt	ctaatttttc	agtggaaagta	gttagagaat	catcataaag	agacaataaa	202920
tcttcatcat	aacctatagg	aacattcttt	aaagagtctt	ttttctccaa	atcttgaatt	202980
gaaacatatt	tcaccgatga	attactactg	ctattagagt	tattgttaaa	gttcttccag	203040
ggtctctttc	caaacttctt	ttttgacttg	tcctcatctc	ccagggccat	attcttaaatg	203100
taacaaattg	gcataacttg	agaccagtac	gagtcagaaa	tatgatttga	gaaatagcgt	203160
gtcaggacct	ttgtttcagc	aaaacctttc	cccttgtact	ggataaaaagt	tctcaaggga	203220

cggccaaacta	ttctaccctc	atggcctgta	tttgccaaaa	cactgccctt	tccttgcttc	203280
ttttccgaag	aattgacaac	tttcttgtag	aagttaaacc	aaaacgagca	atcacttcct	203340
tcatgtttca	attggtcttc	agaaatttca	ttggtctggt	tagcttcatt	attattatta	203400
gagagaaggt	gacctgatga	ggatgatcca	ccccacacc	caccatttcc	tcctcgcga	203460
acagaagaca	tgtaatcgcc	aggacatatg	atgttcatat	cataaacgct	tcagtatca	203520
gtcaaatcgc	ggcactcttt	tcttatcttg	ttagtttctt	cctcaactgc	cttattccac	203580
ctttcaatgg	catccattcc	agcacttaac	gcagtttcag	tgacaccgta	caaagcatac	203640
tcttttttcg	agaaaaggaa	acaaatctta	aaaaagtctt	caatgtcaga	aattactttc	203700
acaatgtcat	tatttatctg	attttgtgtg	atcatgttct	taattcgggt	aagtacatag	203760
ccatcgtag	aaaacaagcc	actttctctg	tcttcttcgt	ttctggcgtc	catgtgtatc	203820
tggctgaaac	ccgtgcggga	tctcgagtcc	tcatcaacta	cggatgatga	tccccgacta	203880
gaatcatcat	tgtaaaaacc	accgcggtta	ttaaaaacct	ctccgccaga	tttctttgat	203940
cgtccccctat	tacttccacc	ctttcctgtc	atttgttttg	caccactatt	atcctccttg	204000
ttaatctctt	ctagagaagg	atcgataaat	gcttcttcgt	tagcgtccat	tacttttagct	204060
tgaccggcag	gaatgtttgt	gaaagaaatg	ttagtggtga	tgattctaga	ggacttttct	204120
acagcagcga	gttgggcagt	tgtacaggaa	ttactaacca	gattgtagtt	agtatcgatt	204180
ctagtctctt	gcagttcttg	gcgagtcttg	gcgcgggaact	cgtccaaaga	tttaacactg	204240
acatcattaa	cgtccaaaat	acaacaatcc	aacaaatcat	ttgaagaagc	acgcacagag	204300
tctgccgctt	ttactaaaac	aagccttgca	atacgtttca	ttaccttccc	aacacgtttt	204360
tcatacatat	catgtgcttt	ttcgctattt	ttgtcggcca	aagaggaaac	actaaccaaa	204420
ttcttaacta	gtgaaagggg	cctagaaaga	agcctgcttc	gccgtcccat	taggacgtga	204480
gaaaatctat	aggtgataaa	ttgcaaccaa	ttactagtat	caaatccatt	aaaatcaaac	204540
gacatgagaa	tctttcgggt	catttcttca	atgacaatat	cattacttgc	aacttgtcca	204600
ataacatatg	cggcaaaacg	gtaaaagtgg	agaggatctt	cttcaatatc	gtaaaatcta	204660
ccttctttta	tgctagcgtc	ggcctttttg	ggagaatctc	cettgacctg	acagctgcac	204720
cacttgctag	tgatttttaa	gcatcgaatg	agtggtacca	ttttatccac	agatagacgc	204780
aaaggagcag	ttgcaatttc	tcgcacactt	tctccctgca	tcatgatagc	atacatagcg	204840
accattgcta	gcacacaaga	gagggacatt	tctgtcttga	gaacctcttc	tggtgcagcc	204900
atccactctg	cccgaactgc	caaagtagac	ttgtttcgtg	gataatattc	gtcttcaacc	204960
caaatttgat	gcctaacatc	attgctaggg	gtgggtttta	tcttcaattt	cttaattacg	205020
ttgtttattg	ttagcaagtt	gcttgaattt	atgaaatttt	caacagatct	aatgtcgttg	205080
tctttgagag	caaactcata	ggccttgcg	acctgcgctt	tccagtcctt	attgtcgtca	205140
ttcaaaagac	attcccacgt	atcagcatcc	aaatttgtgt	ccagatcttt	accataaaat	205200
gcctctcgcg	taacgcccag	aaattctgat	agctcaaata	cggcgccaga	ttcgtccaca	205260
tttgacacac	ctgcctttta	atttagcatg	tcactaccgt	cccaatcctt	aactaaactt	205320
ccccaatcaa	taggaaggct	gttattaaag	cactccctaa	cagtctctag	aattgtccac	205380
agtctagaag	ctggactatt	ggttccagaa	ccgtatcttg	ttatcaaatt	tgaaaagaac	205440
tcagaatcat	tacttgtttt	tccattcaaa	gctgtacgca	tgatacattc	ttccatcatt	205500
ttaaagcact	cgtatatgtt	aagttttgaa	acgttatggt	ccttgaaata	atttgctgca	205560
tctaaacaca	tctgttgacg	tttttcttta	agttccttct	cagaaagcga	ttgattaaac	205620
acttttagttg	gttttagagg	atcaacaact	gtagaaccga	gcacaacaga	ctctaaatct	205680
tgattcgcac	acaatgcccc	aataccagaa	aagaaacat	tattaacact	cttatctgat	205740
acaccatcac	ctcccgatga	acatgccaat	ctggctaaac	ttctaggtct	aaacgtggtt	205800
atgagtttgt	tatcttcact	gatcacattt	tcatagatac	ccaaaggtaa	tgctgaagat	205860
agacattttc	ctgccaattt	acactgtttt	atggcatccc	acctcttatt	atctaaaata	205920
gacctaatat	taccattaac	tttgtccttt	ttcacaatc	ctaaagctgc	agtaacatca	205980
ctaaagtatc	tcctttcaca	tgccattgtg	ttgaaacgga	gagctacagt	cagatctttc	206040
agatgttttag	aactaggaat	tgggagtagt	tttatgcact	tttcgttaga	catgggtattg	206100
ttactactaa	ggggagaatc	gctcttgaag	ttattagaag	aagcacaaga	acaaaaggga	206160
gggatattgt	tgttgctgtt	agcggttccg	tcttcactat	tgacattagg	cttgacaatt	206220
tctcgtacag	gcatagtaaa	aggcactacc	caattcctca	ttctcaaaga	tcttctatta	206280
atttcttttca	aaatatcacc	agattcagct	gcagaattgt	ccaatgttag	tacatcacac	206340
aaatttttct	ccatttcctc	cacaatgaca	gttgaaacat	acttttggcg	atgacataaa	206400
ctggatctaa	agttgaatgt	tttgatgaaa	ttaacatccc	taaacacatc	atcttgtaag	206460
tattataaac	tactagcatt	gtcagatggt	acattttcat	catcactaga	accaaattcg	206520
cctagaaaac	aataacaatc	atcttcatca	tcaccacat	aataatcacc	tggtgcacct	206580
cccttggcag	ctccataatt	ctcctcatcg	tcactctctt	catcactttc	ttcatcgctt	206640
tcgttactgg	ccacattgtt	caggatctgg	cgagcagaaa	cgtcgtcgtt	gtcacatttt	206700
cttagatatt	cttggttttg	ttgatagagt	ttctccctct	tctccgactt	cttgtctgcc	206760
aaaacagctt	ccttatcaga	cttgacgctg	gcaaaaagtc	gttggaaggt	ctccatgggg	206820
gcgcattcat	acattggtcc	aaaagacttg	tcagattcat	cataatcaaa	cgttttaaat	206880

gtatcgttgt	tcaattcgt	gaccattgtg	ctttcatcat	acttaatttt	gcacaatttg	206940
ctgtttgtct	tgttcttgat	cctctccatg	gaattttcgt	atgctgcaac	tcccattctg	207000
cagacagatt	gcttttcaag	cacacttttg	ggtacatata	tgctaagttc	tcggttaatt	207060
gcgtcgcaca	tgtgtctaaa	cttctcaaaa	cctccttcaa	attcaaaatc	ttcacgaatt	207120
atgtgctgat	agtactcttc	tggatgagaa	gtgatgttgt	acagcgcaca	aaaccgctca	207180
gcaagagtaa	cgactgtcca	cggaatatg	gtgtcgttct	tgtcagcacc	cgtggcgaat	207240
gttgacgtga	tgatggacaa	gagcttcttg	atattttcca	aagaagctat	ctgggttttca	207300
tcagatgacg	aagtggatgt	tgcaccttct	tctagactag	aaaccatata	tggtgttggt	207360
gatgatgttg	atgcagcagc	agcagcagca	gcttcttctt	cactttgagt	agggtggagga	207420
ggaatactct	ccaattcttc	aattgtagga	ggtttttagtg	attctttgtg	ggtaaattgc	207480
cacatttctg	caaatttgcc	ctttgatagt	gcatcccatg	tgttattctt	gagtctttgt	207540
tgtagaatgt	ccgtatctct	gggcaatttc	aggtttctgt	tctcatatct	cacaacaatt	207600
tgaaggatgg	cgaaaggcat	gattgtgtca	aacttgatgg	tgttaacgcc	agtcaaattc	207660
ctgataatgt	tctttgtttc	tggtttcacg	cgttcaacac	aattcttctt	gctcatggct	207720
ttctggggaa	gaagaaactc	cattgccaga	agaggagagt	tgtcaatgtc	actcagaaag	207780
aaaccgtgtt	ttctcttgaa	gaaacacaca	atctgggtcaa	gcttatcatc	gtcattgatg	207840
atgctattat	agacattggc	agcaagggga	gggatttggt	taggggctgg	aggaggcttg	207900
ttgatgttgt	tctcgtctcc	agaaccgcgc	ccagatttcc	ctccagatcc	tccttccctca	207960
ttatcttctt	cctcgtcgtc	tccatctcca	gaactcgtcca	atcctttaca	cgccattctc	208020
tccttttaata	gggtagcatt	tgtcttggtc	aataacaagc	cacctccttc	tgccagaaac	208080
ttgtaacaca	tgccaattgt	acagaaatct	tgatccataa	tcaaactttt	gtttctgtaa	208140
ggcatttctg	gccaagtctc	agaaaaagg	atctttcttc	tccaatcgtc	ggtattggcc	208200
atagaaccca	tgaggttttc	gagatataga	cactttttct	cgaaactttc	cagtgttttg	208260
cacatccact	cttcggtctc	atctgccttc	acgacaccca	gagaagtac	catgttttctg	208320
ttgctgatgg	agagaatgtt	cttcttttct	cccaccaact	gcgcagtgtg	ataggggaac	208380
gcagtgtcgc	tcactttaca	atgtccggga	agattccagt	tatcactccc	gccaatatca	208440
atcttgaaac	aggcaacagt	ttctttgatc	atactttcaa	cacgttcgac	gattctgggc	208500
atacattcac	tcagtaattc	aagttgtacc	tttaagattg	actttaacaa	caccacattt	208560
tctgtgtctg	aaacagctgc	aagacgttcc	tcttcaagga	tggttgggta	gaatattacc	208620
ttgagcccca	tcaaagaggc	attggtgatg	aaggcaacct	taaacactgg	cacgtctgtt	208680
gctgttcttc	cacaacccag	aaactctctg	aaggcaggag	tcacacatag	tttctctgca	208740
ctagaagttt	cttctcata	aagcctcatc	ataataataa	gttccctgag	aagctttcca	208800
gttccaacgt	ggggtccttc	ttcatccatg	cgctattttt	cattctggca	agaacgctca	208860
ttcagcttgt	ccagaaattg	atcaccagta	atcttctggaa	ccttttttac	tttgtacatg	208920
cctttcttct	tggattttgc	aacatccttt	aaagttgcag	gttgactgta	cattatcaat	208980
tttccatcgt	ttctctgtgt	cactgtgtca	tattcaacaa	cattacatcc	agcatacaga	209040
agattgttgg	ggttgacact	gccgtctccg	ccgactctat	ctgttacagc	tagatgcccc	209100
atgtgtttga	ccagagggtt	gccattcttg	gtcaagttat	cagtgactag	aatttgttcc	209160
ccttcgttga	gaaggagaag	aggtagacgt	ctgttgtcgt	actcgggcag	tttgttggag	209220
agacagatgc	gtagagtcgt	tggttcctct	ttcatctggg	tggcacattt	tattaagtga	209280
tctcgcacat	cactttcaag	aaacttgcc	cctcctaggt	tgagcacatt	tgccctaaac	209340
atattgacga	gtgcagtgtg	ctggttataa	gttttgtttt	ttcttggtta	gttatttttc	209400
tgaatgtagg	ataaaataac	gtaacttttc	ttgtgtcgtt	gttcaccaag	gaatcttttg	209460
atatcaatta	cagctacaac	tggtaagggg	gttgctccgac	gaccgtctgt	atcctacggg	209520
atccagtgtc	ggactgtgag	gcagagagct	tgtgaggcg	tatttataca	agaatagcag	209580
ctggtgccaa	ctagtgattt	tatagaacag	aaatcatgga	ccagtaccca	gaagtgaggg	209640
atactcctca	gacagaacag	gaacaggcgc	cggcgcaaca	acaacaagca	gcaacaacaa	209700
cagctgccgc	tgtcgtctgc	gctgctccta	cgcagtagag	taacactgtt	tctgcagaaa	209760
cttttctcgc	cattttctgaa	gatggaaaa	tggagaggtc	aatcgcagct	tcgtgtctga	209820
tcaataacct	taaccctgat	gaaaaaatgg	ctcaagctgt	ccaattccat	ccacttagtt	209880
ccacgaccac	atacgattca	gaaaaatgtga	accctggtag	ttctgttgtg	tttttgaagc	209940
ctagagccct	ccccaccggg	ggcacgtgtt	tagcccccaa	ctacattgca	gtgcctactc	210000
ttcgtgtctg	gtcagaaatt	atcgattcta	ttgcatcaac	tagtctatac	caatgttcaa	210060
tgttcaattc	gtggaatctt	attcccattt	ttatgagtaa	tagcaaacat	agtcaattcg	210120
gtgatcgtgt	catcaagaga	tcaatgatcc	gtaattgttt	ttccaaacaa	aaaaatgtag	210180
aaaaatcttt	aaaggaattg	cgcaggagaa	aggttaacgc	cgccaaggca	ttttctcatg	210240
cagttcaaca	gaaatcagca	gtaaatactg	cccttgagc	atggaacgcg	ggaagtgtctg	210300
caaacctcga	aaaattagta	gatttttgca	aattgaagta	cagtcgccgat	agaaaataca	210360
aagcaggagg	tcttttttagt	gcgtcagcaa	cagctcagtc	acaatcaggt	acttcttctt	210420
cctcagttga	acatacttct	aatgatttct	tactcgatat	cctaaaacgt	cacaagggaa	210480
cgtcccttga	tttagattca	gcaacaaaca	catttgatac	tgctctttct	agggttttta	210540

ccgagtttaa	ggaacaggct	agagcagccg	tagatgcagc	cgcagattca	gatcacctat	210600
ccgcgtcgga	ccctattttc	tctattgttc	gacacaatag	caggcgtgag	ggtattctag	210660
attcagtgcc	aaatatcggt	atgttggttc	cacgatcaaa	atattctgtc	gcagagtact	210720
tgatggcaga	cagagacgag	tctgcagata	tcgctgctaa	gatagggaca	aagattgcaa	210780
cagattttga	agcattgaga	ggagataata	ataagagaag	agcagatact	tcagtcgatg	210840
atctcaaaga	atcactagcg	gattctattg	aaaaaacttc	cattaaaaat	accggcgata	210900
ttaattcggg	cacaaatatt	cccacagata	cagaggagta	tgaattttct	ctccacatca	210960
cacagctttt	cgcgaggca	tttttggaaa	ctatgggaag	tttattgagc	tgtgctttcg	211020
gtgtacagtt	ccccttctca	gatgaagggt	ttgctgctat	cgaaaggatt	atacgtaaaa	211080
cagatcctga	tactggaaag	gtttcagaaa	tggacccttc	ctctctttca	gatcaatatc	211140
tcttgttggt	aggaaatttc	caggtttctc	ccttccacgt	ttcagatcct	aaggatatcg	211200
ttttcggtag	acaagttacg	cctaatacgc	ctatttttag	tatcattact	agatctaaaa	211260
atgataagaa	tgaacgtct	actattatta	atttcaggga	taggcttctt	gttaacgata	211320
ccgtgttgag	agacgccacg	caaaacgtct	caacttccac	cccttctcaa	agaagagtc	211380
ccaccgccgc	aggtgaacca	aaaaagccaa	tgtctcttgg	ttgcctacct	atcatcaggg	211440
gaccccgagg	agtgaccagg	gaaagtgatg	atatgattag	tggctctgtg	ggtgattggg	211500
atatctcttt	gggggtctat	tatgccatgg	gttcatcggc	tgcagctatt	gccgctggcc	211560
accagagagc	tctcgcttca	gccgagtcaa	ttaattcacc	catgatgaaa	aaattctcaa	211620
agaaggagg	aaagtataca	gaggaggaaa	agcgaatcaa	gaaggctatg	cgtaggaatg	211680
cagatcgttc	tgctaggatt	ttggctttgt	tggggcaaac	tgatgcccg	tatgggtatg	211740
tcgaacataa	ttctacccta	gattcgttct	ggtctctgaa	tgccgctatt	cgtgcaaagg	211800
caaaggagga	tgctcttagc	cgtgcagaaa	tcttggcagt	taggaaacaa	ttggacggaa	211860
aatgttcctc	ttcaagggat	gaatattcca	tggtagagag	atatcttaga	gactcatttt	211920
tcaggtcagt	taataggtca	ggaggaggat	atgaaatgtt	tgatcaagg	tttgatatgg	211980
gaagatttgc	cgactttttg	agtgacaact	ctgctgccag	gaacgcttgg	caacagtagc	212040
cagaagtaat	gagaggactt	tctaagcatg	agaaacgcgt	attcaacatt	gaaggctctt	212100
tcagtgtctc	aaattctttc	aagttccccc	ttgttccaga	acaggggcgt	aaaaagactg	212160
taggtggaag	gcataggctt	aacaatttga	aggcggccaa	taagatcatt	aacggcatca	212220
cagagatgac	tctccagtca	gccatcgatg	gtactggaat	ctctgatatt	attggttcag	212280
ttagcgatgg	gtggggaaat	actacagctc	agccgtctcg	cgtcaaagct	cttaaaacat	212340
tgtccaattt	cagcgaaac	ggaaatgttg	tgtcaattcc	agttagtcga	gcagtaaagt	212400
gtgccgcggg	aagtgcagg	ggggaaactc	tcaagtggtg	ggacattcct	tcagtcatta	212460
ttgcaaacct	aatctctgat	aagagaattc	tagatcaact	ttgctggagg	gggatgaacc	212520
tcgctcacga	aatcacaaac	tttatcgaga	cgattgcagg	taaagaacat	acaggaaagg	212580
aatccgtttt	cttgtctcct	agattgtctg	tcatctcttt	gcgttatatt	tggttcaacg	212640
cagcggttgt	ttcccttacg	gatagcaaca	ttaaaatgcc	cctcaacaca	atgtccgagg	212700
gcactggcga	tgacatttat	agggactatt	tggccatcag	aggcatgggt	aataattaca	212760
acagtagtct	ctcctctatt	tcagtcaagg	ctatttccga	taggtacaat	tgcggtagtg	212820
gaaatacttc	aaccagtaat	aagaatgtga	ccattaagac	tcaaggtgaa	ttgttaactg	212880
tccttcaaca	gactgcta	gccttgctcg	cctttaccaa	caaggagggc	gtgggtgcaa	212940
cccccgatgc	tgccaatatg	gccaacgcta	tttcccacat	tgctaatgcg	gatgtagtta	213000
agaacaccaa	cgtggttgtt	tcagggtctag	ataggatcac	tgagaccatc	aacttctttt	213060
catTTTTgtc	tcagatcaaa	acaatgaacg	agaacattga	agagtatctt	aggagatata	213120
ggctaggaga	aggactagat	aagaaagaat	tggataattt	tgtgtatcca	aatattgcag	213180
ctattgttaa	gcgagaattg	gggtaagtgt	gttccgcatt	gtccagtaat	ctcgatactg	213240
atcgtccaat	tactatcgac	ctgaacactg	aacagccttt	gatcgtaaag	gctagcaagg	213300
gttatgcctc	taaccgctac	gctaaattat	tcaacaaaac	aacaagaaca	gcagcagaac	213360
aagctcagat	ggagcagtat	aatgcacaaa	tggctgccaa	tactattcct	caattagtaa	213420
acaggttgac	tcccttgga	tccatcagcg	cagacactgc	catcaatgtc	gttaaagctt	213480
tcacagaaaa	tcggaatttt	agtaacgcag	aaacacactt	gggggttatg	ggtaacgcga	213540
ttaatgaaat	gcaacctctt	ttcacggacg	gattcaacgt	tgcaacaag	cgtttaacag	213600
ttaacgtggg	ttcagttagt	aagctgattc	agaatgggtt	aaccgtatct	ctcattcttg	213660
ctcactcaaa	ggctagcccc	tatgtcttta	agcctctcgt	gcaagatttc	gctaagcttt	213720
tactggcagt	cactgcagag	acttctcttg	ttgtctctag	gtcccagaag	agtttcttcc	213780
ccattctctc	ttcagtat	tcttcagggt	gtcttttcaa	aattgatagg	gaaatgttcg	213840
ataatatgaa	gacagattat	gtagtggaa	taattagaca	gctatctaag	aatgtaccg	213900
ccgccatcga	aaggtgcaat	gattccgatt	cagctgctag	gattgccaa	tcaggtgaaa	213960
tttataacaa	ggatgttgca	tcaaccactg	cagctcccg	aacttcttcc	tccgctttta	214020
ccttgttcgc	caataatctc	cagaaccctg	caaaggtatg	gtctatggga	gctctcccc	214080
atttcgat	ggccgtggta	ccaaaacttc	atggcatttc	tcacgatcaa	atgttccgcc	214140
tatctacata	ttatcagggt	attcataaga	tggaaactta	cagcgattgc	aaaccagaag	214200

aatgggataa	ttctcttcct	ggaaataggg	ctagcaaatt	ctttggcctt	tcttcgggtga	214260
gcgataacaa	ccgttcattc	aatttggcat	tggatactct	tttggcctca	cctgcagaga	214320
tttgcgatct	ggtgacgagg	gaaatggtaa	agaccagtaa	cgatattgtg	cataatattg	214380
gatcgaattc	caacacggac	gcgcttcaaa	agagccttca	agttgggtgcc	tcagcagtag	214440
aaaaatacga	cgagtctact	ctttctacta	aagaaaactga	cgatatattcc	cttgtttctg	214500
ctctggctaa	gagcaaatct	cctctatctt	cttcctcatc	tttgtcgtct	gagggacatc	214560
tcacctctaa	ggagattgat	aggacatgga	acacccccgc	tcttctcggg	accgctaaaa	214620
ctacatccta	ttctgtttct	gaagacgctc	tcaatgctcc	tctttcagcc	gtgttggtg	214680
ttagaaggaa	tgttgtggat	gtactaaaat	ctctgtacga	agttgcagct	gtttgtagt	214740
tcagttagta	agaggaggat	gtgcgttctt	cgagtagaaa	gattatggga	atggtggaac	214800
aagaatcgcc	cgttatgcaa	gacattggca	ttgaccgcat	tgctagtctt	gttagtacag	214860
ttgctacccc	caaacagcat	cgcagattct	tacagacagt	aaacgattac	aaaaattatc	214920
tcattagaaa	agttgcatcg	aatccccctc	tctcttcaag	attgggagga	atatccccta	214980
ctagtggtaa	caccgattac	aaccttaaa	ctgtatatga	tgggtgtgtt	tcttccctcat	215040
catcaatgac	cccctcgctc	atgtctgtct	ctgacagatt	ctggtcggga	gtattttctc	215100
agtgcctaga	gactggccct	tcaatgtttg	ccgatgctgg	tcattggagg	agtaacatgt	215160
tccaaatcac	tgcacctaaa	ctttacgggt	ctagagtcaa	cacctacgca	gctctgagct	215220
ctggcgttga	gcggctgaga	gactctatct	cttctgcgac	tcaggaaa	aagaatagga	215280
ttgcaaagag	catcgaagct	ctggaaacgt	tcgtaaccga	tgtggtgggg	ggagataact	215340
tggatcaatt	gcgtaaggcc	cagaacatgt	acaacaaact	gtcagatatt	acttccaact	215400
ctatctatag	tgtattcgga	aacattgact	gcgctaaaat	catgaagaat	gtgacgagca	215460
agaaaatgac	cgctagacaa	caatcagata	ctattcttag	ctctctcttg	cacgaactcg	215520
ctggcctggt	acacaaacaa	caacctcaat	tggctactca	atctgtctct	gcgagccatg	215580
ttatcaaggc	aaagtatgtc	actaatgacc	tcaataatat	ccacgagaag	gaaacattca	215640
gtcaattgat	ggccgtggcc	ggtgttgccg	attactataa	tgtgtcggca	gctgccatgt	215700
gtcagcgtct	agttgcttcc	gacgtaacaa	tgttccctcg	cggaaccatg	ctccaacaag	215760
gcctgttcgt	ttcatctcct	cttaacaacg	tacttttctc	ccaggtttct	gataatatta	215820
aaatgaacga	attgaacgat	gaaacaaagt	ctcttttggg	taaactggta	ggattttgcg	215880
gtacagtttc	agatgcgcta	ggatctaggc	acgtgtcttc	aattagacgt	gtacagaacg	215940
aagaggataa	gaaattagac	aggagttttg	ttacatcact	ttattcagca	tacagagatt	216000
tgaggaagaa	gactgaacta	tacagggaac	ctgatactat	taacaaactt	ttcggacatc	216060
aaaactttat	gtcttacgaa	tcttccatgc	ttccttggtg	catgacgctg	catgacgctg	216120
tttccggccc	taggccaaga	aggtagacga	cccttgagga	tgtacttgag	gctccttcca	216180
cggttcacaa	atcggttcag	gtttcttacc	cagagagggc	agctgcttct	aggcgagtga	216240
agagggctgg	actcagggct	ctggctgata	acaggatgga	atctctttac	ggggaagaag	216300
tcttgaacga	tatgaggtct	tcggcggtct	cttccgaaat	gatggatata	gagtatgggt	216360
agggaggatt	catgatgatg	attagtgatg	atgaggatga	tattgccttt	attgattccg	216420
aagaagagtc	tgaatcatct	actgatttct	cctcatcaga	tgaatattcc	gattcatccg	216480
atgagtatga	ttttgatgat	gataataatg	gccagtctcc	ttattcaact	acatcttatt	216540
cgtatgatgc	tctagaccgt	ctgaattctg	ccgctaagcc	tcttactgcc	atctacgggt	216600
gcaggggaga	agggtgaagac	gatgaggaaa	atgacctcta	tgaagaagaa	caagaaagga	216660
ggagacgtcg	ctcatcaaa	atggggaaga	tccttagaga	tcttcatgag	agtgatgatg	216720
acgacgatga	ctactttgat	gacgaatttg	atggcgaacg	ttcaatgtca	gaaactattg	216780
caaccagaag	agctggccgt	attcaatatg	gtccagggtt	cctatctcat	tctaataattc	216840
ttaaccgtcc	ggctaaagca	cgcgctttct	tgacacgagg	caagaaattc	aggccttctg	216900
cgtacgatag	attctttatg	gaggatgacg	attccctcct	cttctctgac	gaatctacca	216960
cttcttcttc	ctcttccgat	tctccattct	cctccttcag	caaggggaga	aaatgcaagc	217020
gccgaacaag	cgaggacca	tgtgcctttg	ttaagagagt	tgtacgtgct	tttgtgccca	217080
ccagatgaac	aatgatcaat	ggtcgagtta	gcatagctac	cccagtgact	agtgaataat	217140
cagtaggatt	ctatgaaaa	taccagaagg	ccaacaagag	ggaaaaggcg	cgtctgatcg	217200
aagaatacaa	aattgttaag	ggtgcttcag	ctaccttgcc	cgacgaatac	gtagagggtg	217260
gagcatctaa	acaagtgtct	cccagggaac	tgaggaggtc	tcttatcaag	gcagctgctt	217320
atgttgccc	cacccaagaa	agtaacttga	atattatctt	tgacgtctct	accacaacat	217380
caaacgccac	tctagttaat	gacccatcta	ctcttttggg	tgatacactt	ttgttcgcca	217440
aacaactaga	ggcaattacc	gagaggagga	ataggcta	gaaagacct	actgaaatct	217500
ctccttctact	tttcacatca	tccggtgatg	caagtaaaga	cacccaatg	atggccgatg	217560
ccaaacagat	cgtttccagga	ggaaatttca	agtctgccgg	ctatctaggt	gtccctctca	217620
gaactcttgc	ttcatgtatt	aagggcacta	atacagttga	tcgtcttttg	gctacaaaaa	217680
ataagaacca	tctcgaatgg	atgaccacag	ccgtatttgt	ttttgcacgt	tcattcaacg	217740
atactacttt	ccatgcactc	gaagatacac	taaaaatgac	ctccgctttg	acagacatgt	217800
acagcgcttt	caccaacctc	gtcggatcgg	aacattctca	gcgtctaaaa	gtaaagagta	217860



ctctttttaga	ttctatttttc	aacactagga	tggctcacac	tgaagcagtc	atgggtctctg	217920
tataccctac	agcgttcatac	aaccatgaaa	tgccctctga	ttacacacag	cgcagagaga	217980
tgcaatcact	cgctcttaac	attcttaggg	gagttaattg	tagccaattg	ccacgaaagg	218040
atattggaga	cactgctggc	ctgttgacct	ttattacatc	acgtaaattt	gcaggttatg	218100
gaggagaaa	gggaggtttg	tctctataca	gaatgtccat	tgttgatgct	ctttcttgcc	218160
cctctgacaa	tcggctcaag	ggagcagctc	ctctagagg	aggaaagtgg	caggatatgg	218220
gagaggaaat	cttctacaag	aggagcaacg	atctggctga	tttttgttca	aagaacaata	218280
tttctctgga	aaatgccgta	ggtcctattg	ctaggtttgt	tcccaatgga	actaacatgg	218340
ctgatattgg	catgaccgat	atcatttcta	gaacagtcaa	ggatgacgct	tcaatgatca	218400
ggcttagggc	cgcagaagag	ggcgctggcg	cagcaggaaa	attcattaca	gcctcagcca	218460
tgggtaattt	gtacggaggt	attgataccg	ttgtgaacct	aactgaaaaa	ctatacgact	218520
cgttcgttct	gctccaagat	tcagactcgt	tcaatacacc	aacagaaatg	gccactgcta	218580
ttatcaaccg	tatgaagtgc	aggaaacata	aggctctcaa	aacaccattc	gggggagata	218640
ttgccaccta	taagaacttc	ccatcctcct	ctgaagcaat	tgtagttaga	gccaaaggaaa	218700
tgcgtaactc	tattagcact	atcgtgatgg	acatttccaa	gtcaagggga	atcaactcgt	218760
tctcatccc	cagtggttct	actttggcca	agatttccac	atctgaattt	gaaaggatac	218820
tagaaacatc	tgctgttctt	tcaaatataa	aggccaatct	gagaaccatt	gagaatagac	218880
tcgccgaaca	ctacaacaaa	ctaaaacaat	tcagccatat	tagtaatgat	ggactttccg	218940
agacacgcgc	agtcgttgcc	gtaattgctg	aatctttaac	ccccgtgtat	gcggatgaca	219000
ccagcgagag	aggagcatct	gttagtgaac	tattgacaga	caatactctc	ctcaaattta	219060
ttgttcaaaa	tgaactgaaa	aacattgaag	aggcaaaacg	tcacgtgacc	gccgcaattg	219120
aaggttcac	ccaactgcac	gaaaaaatgt	tgagcctgct	cgttgcctca	gccgacatca	219180
accgtaigt	cgcccaaaat	aacctcgaat	gtaagaaatt	gactgaagga	aatagtaact	219240
ttgtaccaat	gactaacgac	caaggtggta	cattcataaa	gcacaaaagaa	acaggtatct	219300
ggctgaagac	cgatgaagaa	aataacacca	gttctatcaa	ggacaatgat	cagcgtagag	219360
tagctaaaac	catcctcgca	attgtagagg	acaatagaaa	tgcaaccatc	cgttctctg	219420
tacagtctct	ttgctttgga	aaatatgcca	tgaacgacat	ttttgcactt	gatgatgccg	219480
atattaagaa	tatggacaaa	ctcattgaaa	aactaggcga	agcactcgca	gagaaggcat	219540
ctccttctag	ctcggccatt	tcttcttcct	catcatctaa	cacaacatcc	tcctcttctt	219600
ctcccagttc	ttccccatca	tcattcatctt	cctctttctc	aatggactat	tcaaacaacc	219660
ttgccaaaa	tatcccttac	atgcctatcg	tcttccaaaa	caaacaatct	aatgtcaatt	219720
cttctcgagc	atcatcctca	tcaccatcat	tctatcttct	ttcatctgcc	aatattgata	219780
atgttgagca	caaaaaagtg	gctctccaac	aacttcaaac	acaagaatct	aacgatttga	219840
gtaacgtact	ttctgttacc	accaagcaca	gatttgcgtc	tcataatcaa	gctgcaactg	219900
ttggcatctt	caacggaagg	caacacgcag	agacagttgt	tgctatacca	aatgcaaaaa	219960
aggctaataa	taatgccacc	gtttccgcag	gccaaaggaat	tcttaccgc	ttctcagccc	220020
ctgaaaatgt	ttcctccacc	agcatgcaat	tgccctccatc	atcatcatca	tcatacaaatg	220080
gagatgataa	taaggtacca	gtaactgtca	ggctttaacca	gtacgccaac	tcaatcttat	220140
catctattga	aaacgcatca	gaatttaagg	acttgaagga	agcagaaagg	aaaatcgatc	220200
tggccatcca	ggcagcttcc	accacagaaa	caaaggaaat	ggtcaccgtg	tctaagtgcc	220260
cctctgctaa	ccagactgcc	atcactgcca	tctctcaagc	taaatccctt	aagaaaagtg	220320
ccctcgaatt	attggaaaga	gttatcaagg	cagtcgaggt	ttacacccca	gattcatcta	220380
ttgcagccgt	ttctcttccc	gttaattggg	attctatggt	ttcttcttcc	tcgggatcag	220440
gatctgctcc	ctcttcatca	tcctctctct	catcttcatc	ctcttctctt	aatgtgacag	220500
actatttcaa	ctatgcttac	ggaaaattga	agaacattga	tgaaaatact	gaagaagggg	220560
cagaaactgt	ccagaaaaac	atggtcgaac	aagatgctgc	cgttcgcac	cctcttctag	220620
tatcatatgc	tccattcagc	gaaatgatga	gacgtgctat	tgacaagttg	aacgaatact	220680
accaactgat	tgatgccatc	aaaacaaa	tcgtgtcaga	cactaaacag	gcttctctat	220740
gggccatcaa	ggaaaacggac	aaggagcttg	atatggacaa	agaacaggtg	atttcaaaga	220800
ttaatcaact	gcaacaaaaac	ttttcaaacg	aatcagacaa	gataaagatg	gctatttagt	220860
ttttggacaa	caaaaaggaa	gaatttagag	ttcagacaaa	caaaactagg	agctttattg	220920
aaactacaaa	gagccgtatc	gaggctgggt	gaggagatgt	agcaaacttc	aaggagatta	220980
tcgattacga	aaacacatct	gaaaatgaca	acaatctctt	ccagagcctg	aaagcattcg	221040
ctgctgataa	ctcgggggaca	gtttacaccc	ccactgacat	gagcaatgga	agagacacaa	221100
aatcagacag	taaatttgct	gacatgtaca	acaaacagat	tctcgaggga	ggaatcaaac	221160
tcacataatga	gggacaaaat	actgtaaaag	tagacttttc	aaaggctttg	gaggctttcc	221220
ctagacaatc	caacggtgct	tcagagcctg	tatcttcttc	agttgtggag	aggagacagc	221280
gagaacgtct	tcaggctgtc	gagatgttta	tggcaataat	gatggagcgc	accgagagtc	221340
tgaggaagag	gttggcagat	tcggctgctc	agtggaaatc	tgttaataat	gtagaagaaa	221400
ctgttaatag	tgggtatggt	aacatcaaga	gtgaaaggct	cacagagatt	aggaatcaag	221460
cacaaatcgc	tgaagcact	gcactaaact	ccatcaacga	cgaagattgta	gagtcctctc	221520

tcaccctctc	tttgggagca	cgagtcgacc	agctcttgat	caaggtagat	agagtaggaa	221580
gtatccaaca	gcagcaacag	caacagcagc	aacagcagca	gcttcccaaa	ttgacagcta	221640
cagaacagag	aaaggaacaa	caatacgtcg	cagatagggg	tgtttacgat	ccttcataca	221700
cctgcttctc	gcaacctctt	cacgagacaa	ttaaactgat	ttcttctgtc	tataattcaa	221760
agaacaagg	tcctctcagt	aacacacgtg	gtgttccccc	tagcgatgcc	gacttgcaac	221820
tgatgaccat	cactgacttg	tctaggtctg	tactcgactc	ttcttccact	tcctccaaga	221880
aaatgctgta	cgaatatgtt	ccctcatcaa	ttgttccctg	actctgccag	caatgcgcaa	221940
tgatgatcac	caacgtccac	gaagccactc	atacttctcc	tcattcattc	aatttcgaga	222000
acaaaagatc	cctgaagcag	ctgacagaaa	tggtgaacgc	tgccacttca	tccagtgcag	222060
gtcctgccgt	gagacacgat	gtactaacia	tggttagagtc	caacaatggg	tacgtcaaag	222120
atthttggatt	cactcaccgc	caaaagggtg	cgtgtatcac	ccctgttaat	acacttctgg	222180
gagggtacttt	cagtggaaat	gttgcaacct	atactgttat	ccttccctact	tctgagttgt	222240
ttaaactgccc	aggagttgaa	aatgacaaat	ttagatccat	ggtaaacagg	acaaccgaca	222300
agaatgtggc	tgacgcaccc	aagtcactct	caagcatcgt	ggagactcct	gctcgcacgt	222360
ctcccaacgc	cgagcacctt	tacttcccct	tcaaggacca	gaggcgacac	ttcaactcca	222420
tcaccgcagc	catcatttct	ggtagagcgc	gcgaatcttc	atctcaattg	aacactactt	222480
gtgatcaaaa	tctgttaaac	attgatcaaa	ctactggctt	cccagtggtt	acaggaagaa	222540
agcagggcga	aagaaggatt	gtgcacactg	aaaacactat	ggaaggagct	cgcaaggaca	222600
agaacagtgg	catcccttca	tgtacaaagg	accgtcaaac	ttatatcgat	atgggcacaa	222660
aattcatggg	gttcgcagcg	tctcttctga	atgtctaaca	ggaagaaact	ctccgctcaa	222720
acaggctttc	agacattaac	aacgtgagac	attatggcac	tgatgttcat	gtggcaggcg	222780
caaactctgc	atggagaatt	ggtagagggtg	tgagagccgc	ctcctcattc	cctgacggag	222840
ataaggaatc	ggctatgaaa	aagatgcttc	ttctaggatc	tgtatctgcc	atctctgtct	222900
aaaaatctgc	cagtacacatt	aacgatccca	ctgctttgtt	gagcaccaac	acgtctatcc	222960
agaatctggg	caaggaagct	ttcccagacc	ctggtttgtt	ctctaattac	ttggggctctg	223020
ctgaatctac	gttcgcactc	caactcgcct	accgccagcg	cctgttccct	aacggagatg	223080
acgaaaacgt	tacaaccggt	tcaaatatct	gccctatgga	tttgatggga	agtacaaagc	223140
gctacaatga	cgctttcaac	aacatctttg	gctctaaaat	gacatctact	aacaaaaagg	223200
ggtaaatgtg	tgaatatcta	ctgaaatctg	ccatgtctaa	cgttcctgct	atcaacactg	223260
cctttggagc	ctttgaagaa	gcttcatctt	ctgtcaggaa	taggctttct	cccctttatg	223320
aagacagcac	caaataattcg	tccaaccaac	ttgctgtaca	ggccatgacc	gatactgctg	223380
tggtatgctt	gtccgctggt	tctactgttg	ctgggtcgcca	gaatggcaga	aatactcttc	223440
tttctctccc	tacttctatt	acttctatcg	caaccagtg	ccgtccatca	ctctcttatt	223500
cttcggacat	gaaatctaac	ctcatcaaga	caatttcccg	catcaataga	gacgctagcc	223560
tcctgtcaat	gggagacagc	caagtagctg	cagggtcttc	cttctttaac	tctttccttc	223620
gttcttcttc	catccctgtc	accaccagcc	aggatggaaa	tggtgcagca	gcggaaattg	223680
ttctggggac	tattctcgac	aagactgttg	agatcaacaa	gagattcgag	atgcttggag	223740
gaggaataat	ggctgcgggg	agtcctgaag	ctcgtgccat	ccagcgcaat	acaatgtcct	223800
ctattctcca	gatgaacgaa	aatgaactcg	ctcgtgactt	gtgcgaaatt	gaaaataaaa	223860
ttgagactag	gcaactgagg	gatgctttcc	aggatttgaa	gagggtctatg	ctgatgactc	223920
caggaggcgt	gggagccatt	tcttctggag	caagtaccaa	caatgttccc	ctttctcttc	223980
tcattgtcacg	tgatgatgca	tccagcggtc	ttctgatgaa	caacaacagt	gccaatgtaa	224040
tggaagctgt	ggatagtctt	aatactactc	ctttgtctgt	taggcacatg	atgttggata	224100
gtggaaagtc	ccccgttccc	atggccaagg	aaattaggag	catgctgacc	caaccaagag	224160
ctctcaccgc	ccgcgctcta	ctgagcgaat	cttcccctct	tctcactgaa	atctgcctct	224220
acaacacccg	cgacactcaa	ccagaaagg	cagtcgacag	actactaact	tcagcctatc	224280
tagtaaaaaca	agctaaaaga	ttcgacggag	ttgaccacag	cttccctgcc	gccctcacct	224340
gcgcttctca	cctcatgctt	tcttccatgg	attcccatac	aaagtcatct	ttcatggaca	224400
acatcaaat	gcacatgact	gatactcaat	gcttcttcaa	gaacattgaa	cgattttgaa	224460
aattcttggg	aagatattgg	gacgaatacg	ccatgtccca	caagcaaaat	tgtaactgcc	224520
ccttccatct	ccaccacact	tttactccct	cgataaacga	gcattctggta	tcctctttcg	224580
cattcgcccc	cccagaagtc	tccatggaag	aaattagagc	cacaccctat	caggccaaca	224640
agcttattag	tgacaaacat	tacgtgatga	acatgtccaa	gatcgattct	agagtaacag	224700
gatcttccct	ccttaagaag	gttagcgaat	ggactgaaat	gagaatgaac	tccaacttta	224760
atggaacatt	tgaaccatca	agactcgccc	tctccaactc	tggcatgaca	acggcaggag	224820
tcaacctcga	cgttattgtc	aaaccaaaat	atgcaagaag	tgtactagga	atattggaat	224880
gtcatcgcca	gcacgtgtgc	accgcgcagc	ccaagggaac	tgtcgcttca	gccatggcag	224940
ccgtcttcca	ggcaaccgat	ggaaacggta	acgaatctga	actgatccag	aatgctctgc	225000
caaggaacag	atacatccaa	aagagcacia	tgaacgtcca	aactgtcgtg	tttgctaattg	225060
ttttggaaca	acttatcgcc	gatcttggaa	aggttatcgt	gaacgaactg	gccggcacca	225120
tcgctgaatc	tgtaccagaa	agcgtatatg	aaaacaccaa	ggaatgatt	gatagactag	225180

gctctgacga	cctcttcaaa	tctaataata	atggaggagt	agaatcaatg	gattatgaag	225240
atagcgaaac	aacatccaac	aatgggtccc	tcctcatctc	agaagccatg	aagaatgccg	225300
tctatcacac	actaatttcc	ggcaaggcag	ctcgcccgga	aaatgtacca	ttcgccatcat	225360
gcgccagcgg	ccctctcgcc	tttgatttcc	ttctgtcaaa	gggagataca	ttcgaagaaa	225420
agaacgccga	acaaggtgca	gcagctgccc	tatcctctac	ctatttctcc	tcttctaaca	225480
ctactcttcg	taagcatttg	gctcgagttt	tcgaagccat	ctctaagcaa	gtaactgatg	225540
ctgaattcaa	ggatacctc	aacgatatcg	aacgtaatat	ttcttctgac	tatactaact	225600
gtccaccaa	tactaaccaa	aatgcctttg	ctctagctat	caagagagaa	ttcagcagaa	225660
ttgtttcctt	cttaaccatt	cttcgtaaga	acattacacc	cgcattagtc	gaccctaaag	225720
gcgcgttaca	cgagaaagta	gccatctatt	tgacccttct	ttcaaccaa	tcaaaactag	225780
aaaacttttt	ccaatacggg	ctcagtaatt	cgctcctcag	tgatcttagc	catctaaaac	225840
ccattaattg	tagcaacaat	gtcaagaata	ttgaagacac	attcatgtac	agaaatgtcc	225900
accctattct	tattatggcc	ctcccagaaa	atttccacag	tctcttgcaa	caggaaacaa	225960
tggaacccga	tactgccatt	gaaagcagac	gctcccttac	caccttcctt	aatcatocca	226020
acactgcttc	aatggcgaac	ggtgcaagag	ccgctgtggg	tgaggaggga	ggaaacccaa	226080
tggtgcttga	tcttcttccc	cacattcttc	acgagtctac	cgtcacaaca	tcaaaccocg	226140
tcacagacac	cacagaaaac	gtcaactatc	attcctctgt	tacacaagat	cctgttatgg	226200
tagtgaaccc	cttcaaggat	tctgctaggt	tgatcggtta	caacaacaat	actggaattg	226260
atgtcttgaa	tgataagtcg	tgcaactact	tgcaagatc	catgccatct	gaatcatctg	226320
gcctcgctcac	caatactgga	tgctcttctt	cttcttcttc	atcttctgtc	gataccttca	226380
agtacgtcag	gagagacaat	acgcctgtga	atcttccccg	tgacacacca	gccgttctct	226440
gttctgatgc	ttcctctaata	ctcttgagcg	tggttctccag	ggcagatatt	gtcctcgaaa	226500
acatgaacgt	gagatttggt	ttcatgccc	agattattgc	tgccgtctcc	aaattcaagg	226560
ggctgaccaa	ggaagaggtt	attaagcaaa	tggtttctca	gaacaacatc	aacaacaaca	226620
gcaacaacaa	caacggaaat	gggaagaaaa	caaccgtcga	tccagtcact	gggatatttg	226680
ttatcaccaa	tgccacattc	cccgcacact	gctctctata	cactgcagca	aatggaggaa	226740
catcatcatt	caaattgggga	gatatacaac	acagaaaaat	gcacgccaag	gctttcccca	226800
ccttctttat	tggttaaccca	accgccgcgg	caacagctaa	cggagtgcct	cttacatctg	226860
aggggaatttc	cctcactgaa	gaaaaacgca	agaaaatcgc	aggcatctct	gaaggatcaa	226920
ttggcacggg	ggctctgcgt	gcagccgcca	acacccgcct	ctcatccgac	atggaacctg	226980
tcatagaagg	atggaacaac	attgttcagc	ttcaacaac	attcaagaaa	gcttcagata	227040
aaactcactca	ctttttgaga	tcgggaggaa	ttccaccag	aagccaagaa	acaaacgcta	227100
ttattaacaa	gatgcacgac	agcttcaaga	cattggaggga	atgtcgtagg	gtgatccaag	227160
acgaggctgc	tctgctcggt	gccaccagcg	atcttttgac	cgggtggctac	ggaggagatg	227220
ctgctctggc	catggtttct	ccagtacgtc	cagaaatgac	tggtcttatt	ggtgcaatct	227280
ccgcgccagt	tagaggtatt	agccacttgt	tgaaactggg	aggtgtttct	gctgctaacc	227340
cagctatccg	caagcgcctc	aacctaccta	catccaacgg	gaaaacacta	ccagaacatg	227400
gaatcgtaca	caaatcagcc	aagacacttt	tgcttgattc	agactctatt	agcaacctat	227460
acaacactga	tcttcaagac	gttgtctcta	acgctaggga	taacaacaat	ttgggaagaa	227520
ttatgcaatc	tttgggactt	aagggggaata	atgcagggga	tttgggttat	tctgctagac	227580
aactgacgga	ccttattact	gtaccagaat	atggaaacaa	tcgcgatctt	accaagcgtc	227640
aagctatcct	taaaatgctc	atttctaacc	ctgaaattct	agaaaatgtt	gcagatacca	227700
ttacacttac	aacaggtaaa	aatgctctcg	caccgggtatc	tgctcaggaa	atggcttggtg	227760
cgtctctgac	agtcggagga	agtgaggag	gaaaactgtc	atcagacgac	aatgttcaat	227820
ccctgaaccg	cctttatttt	cggtgtctaga	ctagtgtaat	attgtatgtt	taattttattg	227880
tgtaacaatt	ggtttatatt	tgtatgtgat	tttttcggac	aaataaaaaga	attggaataa	227940
aagactttgt	attattttacc	aaattttattg	atttttttta	aacacctttt	tatgccacgg	228000
ggttgattgt	agcatttccct	ccccctggag	atttcatagt	gggacatcca	aagagtgtaa	228060
ctcctagtgc	tgatacaccc	aaacctagga	ggaatccggg	aagtgcagga	gtaacagaaa	228120
gcataaagc	gaccatgctc	aatgcgatga	cgacaacggc	caagccgacg	atgatgtttc	228180
tggtcatatc	agacatgatt	tctgggtatct	gtttataggg	tttcacccag	aagtgtttta	228240
aacccaaaag	tataaatttt	atttctatact	gctcatctca	ctcttccgac	ctcacaaaag	228300
agaaaagagt	cagtcttgct	ccagccacca	ccgaggcagg	agctcctcgg	acgctcctgt	228360
atTTTTgtcc	agaaatggat	aaagtttgtg	ttatatcaaa	tactaggagg	cgacagttta	228420
aggtacctgc	cgatctactg	tgcgttgcaa	cagaaccgga	aatctctacc	aaggaagaag	228480
atgcaggatg	agaaatcgag	acaagagtgg	tggtgttttc	aaggtgcgtc	tcggtccagg	228540
aactacatac	ataaatcca	aatgatgaag	gattttctgt	ccaacttttc	aaggactacc	228600
tgaaattgca	atctgcacaa	ggaaaaaac	ccattgggtt	gtacatccaa	ataaaggctg	228660
gagaggatct	tgaaaggaga	ttaatcagtg	gaggaaactgc	atacctggat	ccggcaacac	228720
accttttcta	tcttgatttc	tccctttacc	ctaattattc	aatattcaat	gacatttcat	228780
cccgctctgaa	aatcattgat	gaagacacgt	acaatggtgt	tgttttctct	aacagtgaag	228840

aaaaagagaa	ggatgcacta	gtgctgataa	gggtgacttt	ttctacgcat	gaaaaggcaa	228900
ttgaagcagc	cataaaaaaa	ataatgctaa	ggaaagtgtt	tttcaaggat	ggagatcctg	228960
atttcgggta	cttacgtata	ccaaaatcta	aactggacaa	atttactccc	tatttttcgga	229020
gtcaatacgg	gatagtaaat	gttgaaaaaa	atatccctgg	ttacatatgg	ggagaaatta	229080
tgaagcaacg	agtgcgatgt	tccagatggg	acctttacaa	caccgactcg	gaatgggaat	229140
ataaaaaatgt	ggccgaagaa	agagttggac	ctcgccagtt	agtgaaaaaa	tatggtgcca	229200
agtgtgaaaa	tttatgtttt	agggacatag	acctcagaaa	aaaggaagca	aaggaaaaaa	229260
gggatataga	aagagaaact	gaaagcagat	atgtggtcgt	aacactaacc	cataagcatg	229320
aaatgcctga	aaatatgccc	tattttggac	caaagtgttc	agtggtgagg	ttggatgaaa	229380
ctagaatact	tttatgtttt	gtggatgaaa	tttcttataa	tgatgaagat	gtagacgaaa	229440
ttttgtctga	gaatagatca	ctaagaaatg	tttctattag	acataaggaa	aatgtacctg	229500
tacacacggt	attaaaaaaa	ggtgtgtcta	ttcatgctag	atttaccctt	aatggtttgg	229560
atgatgcctt	aataatttta	aagagaatac	caaaaactta	ttttgaagat	gaggaactac	229620
aagccgcttg	tgcgcatggt	aaccttgaac	agtacgaatg	gctttgttct	aataatagag	229680
ggaataaagt	agaacatgta	aagtcgcggt	tagtgactcg	agcagttaag	cgtaggagaa	229740
aatgtagaca	ctggatttat	tttgataaag	acactttaaa	tttaaaactac	aaatactttg	229800
ataaaaaaagt	tactgctagt	atggcatcta	aaatatgtaa	tgcaaaaacac	gactgttttag	229860
ttttccatag	aaaaatggaa	ttggaagatt	tgactgagag	cgcatatttc	aaggtagaac	229920
cttccccaat	aaattttgcc	aagttaaaat	cttgcccgga	tgttaaatat	gtgcagaaaa	229980
aaacagatgg	tacattttct	gttataagat	tctttagaaa	catgacaaaag	ggtgatctta	230040
ttcaaaggat	ggatcttttt	tgtaggttta	ttcccgaactc	acacactatt	acacttttga	230100
gtagggcgga	tttttatgca	tgtaaaagag	gagaatctat	gcatatgtgc	acaaacaaac	230160
accgtattct	tcactacaaa	ttctccaacg	ctccccatgc	ggccatcgaa	caaataacca	230220
atatcatcag	tgatacaaga	ggacgtaagg	gtatacacat	agaatacgcg	atcgaaaaatg	230280
tacaagaaat	tacgaagaa	gatggaagaa	gatattgaagc	taaatacact	ggaactttaa	230340
ccgagtacaa	aagaaatgag	gacaaaacct	tcaaatctct	tcttgctcct	catttaacac	230400
ctgtcaacaa	accatataat	attaaccatt	tgtatgagca	atatggaaat	tttgatgaag	230460
aattagaaga	caagttaggg	agtggtttca	tttcttatga	cacgtatgtt	actgcaaaag	230520
acaactgggg	caggtgtgca	actggaaaagg	gggctgcat	ctaggacca	taactcaaag	230580
tcaatactgg	tatgtgtttt	ttgagaagg	gtcagaatgt	gcacattaaa	aacatacaaa	230640
atgactactt	caacagaaat	atcaaagaac	cttcagatg	tgttatccat	caaggcaact	230700
ggagattggt	gcagtaatat	caagcggtta	ttttcacctt	tcacagaagg	caagggaaat	230760
ttaccaaaaca	gtctcccgtt	tacgagaagt	cccaatacaa	catgtggttc	aagagaggcg	230820
gcaaacgcca	cagagcattt	tatcacctgc	tttgcaaagg	acaaatatga	gcggaaaaga	230880
gtaaaacgta	caatcgattt	cacctctgac	aacacaaaag	agttgacgcc	caacagatac	230940
ttggtagcag	atgtatactc	ttggcaagaa	gagaaaaatg	tgtttgaaag	attttgtgtc	231000
ccaccaggaa	agtcgggaac	atttgtacgc	tactctaatt	aagataaaaag	ttttctacta	231060
gcagataccg	gaagatatat	gaaaaagaag	tacgatgatc	cagaaaaataa	gaccagtagt	231120
gggggtgatg	atgacgatga	cgacgatgat	gatgatgacg	acaacaacaa	tgttgacgtg	231180
tatgaagaaa	acgaccccag	aaatgtattc	gaggtcgaaa	aggatgaaaa	atatgcctgt	231240
actttttcaa	ttttggtcta	tagagcaatg	aaaaagtctc	ctcctgtatg	tagaggggta	231300
ttagtagaga	cagatggacc	ctcatctcac	cctaaacggg	ccccgtcagc	atttaatcca	231360
ttcgagggaa	gttctatggt	gaacgggttg	ggtgcagggt	cagatgcact	agaagaagag	231420
gatgaagttg	atggagtcc	tgaaagagag	aggattacaa	attttgctct	caagagagga	231480
cctgcaactg	gccagaactt	tgtatctggt	aaactggaac	atgatggatc	taaagcagac	231540
ctgtacaacg	tcacgtgctt	ctccaagcag	cgtggagtat	aaaaggcggg	acgcatcagc	231600
aaatgcaact	cattctttct	catcatctaa	ccatggctgg	tcgtgtagag	ctcgtcactg	231660
gacctatggt	tgcgggcaag	tctacctacc	tgaaaaacat	ataccaacaa	gaaaaatggag	231720
gcaataaaca	ttgcctgttt	gtcaaacact	ccttagaagc	taggtacggt	tgtggaactg	231780
gaacaatagt	cactcatgcc	ggagaagtga	ttgaaggttg	tactacagtt	tcttctatca	231840
aggaactaat	cagtggtgta	ccagaagttg	tggatgtgat	tctcattgac	gaagggcaat	231900
tcttcacgga	tttgggtgcta	gtcaatagac	tggctgacaa	ggggaaaagg	attgtgattg	231960
cagcacttga	tggaaactct	gaccagcaaa	tgttcagttc	tattcataag	ctattgcctt	232020
atacaaatct	cattgttaag	ctagcatcta	aatgtatgat	ttgtaaaatt	gataccaaag	232080
aaagctcctt	tactgtaagg	tttggtaata	acaatgataa	taatgttata	tgtgtaggag	232140
gagctgaaat	gtacgctgct	gcctgcccgg	actgttacaa	aaaaattaac	aagaaaaaga	232200
acaaggggaa	acttgttgta	cttgaaggag	gtgacagggt	cggtaagagt	acccaagcca	232260
aactcttggt	gaccaataaa	aactcgcttc	tttatggagg	agaatatatg	tgctttcccg	232320
acaggagcag	ccatacgggt	aaactcatca	atgattatct	aactaagaaa	attgaactag	232380
atgatcatgc	agctcacttg	ttattttctg	caaatagatg	ggaagtttgt	agtaaaatta	232440
agcagttggt	agacgatgga	atccatgttg	tgatggatag	atattactac	tcggggattg	232500

ttttctcttt	agctagagga	gtggataccg	ttgagtgggt	ctctgctagc	gatgagggac	232560
ttcctcagcc	cgatcttgta	ttgttgatgc	ttttagatgt	tgaaaagtgt	tcaaataggg	232620
atacttttgg	tgctgaaaga	tttgagacaa	attccattca	agaacgtgct	agagccctat	232680
tcctagacct	cgcaataaag	gacgaaaaga	atgtatggat	taaggtagac	gctcgcggca	232740
ccattgagga	ggtgcaaact	aaaattataa	atattgtata	taatattgtt	gaagaataaa	232800
gaattgtaaa	ctgtttccat	gatgtgtttc	tttcctagt	attttcacat	gttacctaga	232860
aagactttgc	ccgacactga	aaatggttat	tttgtcttgg	acgagtctct	tctggagaag	232920
gtgtactatg	ataacaacaa	tgaactgatt	gtaagagtgt	gtgggattta	tatgcagata	232980
tgcaagtcaa	aatacatctt	ccatcacgat	gatccagaga	ggttctttta	tagtgtgttg	233040
gaggattatc	accccatcaa	agagattggt	gaacgactag	cagaagagga	tggggtattt	233100
ttaggacctg	gggagttttt	atcgcgcaaa	caagtgaacc	tccaacacgg	gtgctacaaa	233160
gctcttttgt	cattgccaga	ggacaaatat	tgtaacctat	tattacccca	gcaaatgaaa	233220
accaacctgg	aaaaaatgga	agaaatacag	cgtactagac	tcattcactc	tagaacgtac	233280
aatacacccc	agatagaatt	gtctgaccag	ctagatggat	gtgttatatg	ttaacacttt	233340
ttcagtacca	tgtaatat	ttgatatacaa	attgaaagga	aaatggttca	gaaattggta	233400
gtaaaaactt	tattgtttct	ttcctctttc	ttttgtctgt	cactttattc	gtcagacata	233460
acaaccataa	tactgagtat	gggtcttggg	tctttgttgg	gacattttgg	gtgtgttaaa	233520
agtatcacag	gaaaaatcgt	ctcaagaaaag	gcaatggata	attataggct	cgtgtcggtc	233580
ctcggctctg	tatgtggagc	aggaattttc	tgtggatacc	agcaatat	tacacctcag	233640
tctgcaccca	tggcgttgc	gtctgtcttc	tgtcgcactg	ctactgctgc	tacatcaact	233700
attgtaggat	tctggatata	gatgattatc	caggcattga	aaaggagtaa	taaagatata	233760
atataaaatl	tgtgtgtttt	atttgtttga	taatacaatt	ttcaccttgt	accgaaaccc	233820
attctctaca	agcactgtgt	ctttggacac	gggatcaat	atcttggatt	ttggatgaat	233880
gttcctgacc	ctcatatctt	cttcattttc	aaatacgagg	agggatgttt	tctcagtatt	233940
cctgttgtgt	atttggaggt	gaacagggaa	ggagaatagt	tgattgttct	ttggtgttag	234000
atggaactcg	tataccatga	attgtactcc	tccaatatct	tcaagataga	tgcattgat	234060
atttttgtca	taccatctcg	tatggctcgtc	agtgtcaggg	tacaatctct	tgtggtgggtg	234120
gttacacatc	tttccactgg	tgggagagga	agtattatgg	ttcaatattg	atggaggatg	234180
gattttttata	ccctcatgcg	aatgcgatgt	ggaaaatttt	atatgtttcc	gacaagggga	234240
aaaatatgaa	taaactgagc	atacacatgt	cgtatccaga	tatctagggtc	gggaagaatc	234300
cagaaacgat	tcaaaccatt	tctggaacat	tcatttcttg	aaagggttac	attttattgt	234360
atctggtgca	ttatttctgg	taccattttt	ggcactctcg	tgtaatctga	cattgggtcg	234420
acccagaggt	ccaccctccg	aacttgacat	taggccgacc	cagcgggtcca	ccctctaaac	234480
tcgagtgagc	tgaaaaaatt	tttataaaat	ttttgatgag	gaaaaataga	agtaagatgc	234540
ttgtcaatgc	atgctccctg	tgggaaggtgg	tggatgagat	aggagggaga	ggctatccag	234600
atatctaggt	cgggaagaat	ccagaaacga	ttctagccat	ttctggaaca	atcatttctg	234660
gaaagggtta	caattttattg	tatctgggtgc	attatttctg	gtaccatttc	tggcacctct	234720
gtgtaatctg	acattgggtc	gacccagagg	tccaccctcc	gaacttgaca	ttaggcgag	234780
ccagcgggtcc	accctctaaa	ctcgagttag	cagaaaaatt	tttaaaaaatt	ttttgagatg	234840
gagatggagt	gaaacttctt	aggtgtaagg	tgcactacag	aggcttgtga	tcctttctgg	234900
gcggctcact	ctctagaaac	gtctgtctcca	gaaacacata	aaaaagataa	agtacatttc	234960
tggaccactc	ccatttctgg	tgtaatctga	cattgggtcg	accagcggt	ccaccctcgg	235020
aacttgacat	cgggcctacc	cagcgggtcca	ccctctaaac	tcgagtgagc	tgaaaaaatt	235080
tttataaaat	ttttgatgag	gaaaaacatt	accagtggag	cgaccgtaca	cactcctcta	235140
gctaactact	aaccgagaga	gtgaggcaga	gtctgtccag	atatctaggt	cgggagaat	235200
ccagaaacga	ttcaaaccat	ttctggaaca	atcatttctg	gaaagggtta	caattttattg	235260
tatctgggtc	attatttctg	gtaccatttc	tggcacctct	gtgtaatctg	acattggcct	235320
gaccagcg	tccaccctcc	gaacttgaca	tcaggcctag	ccagcgggtcc	accctctaaa	235380
ctcgagtga	gcagaaaaat	tttttaaaaa	tttttgatga	gggaatatag	tactccgtag	235440
ccaacatata	cacatgaaca	catgaggcgg	tctacaacag	aaagagaact	gatagctgtt	235500
ccagatatct	gggtcggcca	gaaccagaaa	acgtttcaac	tcatttctgg	acaagccatt	235560
tctggaaaag	ggtacaattt	cttataactg	gtatatcatt	tctggtataa	tttctggcac	235620
cttcgtgcaa	tctgacattg	ggtcgaccca	gcgatccacc	ctccgaactt	gacatcgggc	235680
ctacctagcg	gtccaccctc	taaactcgag	tgacgcagaa	aaatttttta	aaaatttttg	235740
atgagggaat	atagtactcc	gtagccaaca	tatacacatg	aacacatgag	gcggtctaca	235800
acagaaaag	aactgatagc	tgttccagat	atctgggtcg	gccagaaccc	agaaacgttt	235860
caactcattt	ctggacaagc	catcttctgga	aagggttaca	atttcttata	actggtatat	235920
catttctggt	ataatttctg	gcaccttcgt	gcaatctgac	attgggtcga	cccagcgatc	235980
caccctccga	acttgacatc	gggcctacct	agcgggtccac	cctctaaact	cgagtgaagt	236040
gaaaaaat	ttgaaaaatt	tttgatgaag	gaatatagta	gtatagtgcc	cgccaaagca	236100
tacacacact	cgcccatgct	cgtctagctg	atagctgttc	cagatatctg	ggtcggccag	236160

aaccagaaaa	cgtttcaact	catttctgga	caagtcattt	ctggaaaggg	ggtacaattt	236220
cttataactg	gtatattatt	tctgggtata	tttcaggcac	cttcgtgcaa	tctgacattg	236280
ggtcgaccca	gcgggtccacc	ctccgaactt	gacatcgggc	ctaccacagc	gtccaccctc	236340
taaaactcgag	tgacgcagaa	aaatttttga	aaaatttttg	atgaagagat	tgagtaaaat	236400
ttcttgtaga	taagaggagg	cagtaggtga	ggctgcttgt	ttgtagtgtc	agccacatct	236460
gcgtcataca	ttatattttc	aagaattttg	ctgacgtcaa	tggaccataa	aaggctttgt	236520
acgtccagag	acaagtttta	gtctgataga	tttcttaaaa	aaaagagggt	gggagggttg	236580
tttttgtggg	ttctgtgtgt	gtataaaaga	taggtgcaaa	ggtagagaat	catcatatgg	236640
acaaaaactg	tccatgagac	ctcagtagag	aacgcaccat	ggttgcttca	actccgtgtc	236700
caggcccgag	accagttcca	acccaagaac	ttctttctac	aaacttttct	gaagctcaca	236760
agcttgtcgt	ggaactttct	ctcccgtcct	acagttagta	tgtagtttat	tgtgactctg	236820
agacgtacac	caaacctata	ccgatttttg	ggaacaagag	tatatgtttc	accattggag	236880
actatgtctt	atcaaaccct	aatgaagatg	tgagttacca	aatggtttct	tccgtcttag	236940
aaaaatttcc	cttgctattc	cactgcactt	ataagacgaa	tgaagaagat	aaaggtattc	237000
ctctgtggaa	gaagttgtac	aacaaaaaga	aattcaaaact	cctcaactca	ttgttggttc	237060
ataacaacaa	gaactggact	cctgttccag	ctatcccgtt	tgacagggag	aatatatgtg	237120
atgcttcaag	aaggagtgtt	cttatgagtg	aaataatgtc	cacgtcaact	tttcagacaa	237180
tttgcaaaaa	caacacacat	tactgttttg	atattgttaa	tatggaacgt	ggcaaacaga	237240
gagggagttt	tcttcaactt	tttgcatcta	ggaagaattc	ttttactaac	tttgaaaatg	237300
aagaaatgga	ctctcatgtg	ctcagtaaca	tagcgaaatt	catatgcaat	gaaaaggaaa	237360
aactagactc	tttcatacct	gccaacggaa	aaataccatg	ccctgataaa	actaatgatg	237420
aagggtacat	cccgctggaa	atagcaatta	tggaaagacaa	ttaccctgca	ttgctatatc	237480
tcgttttag	gtatggagca	tcttgggcaa	acacatacgg	ggatcataat	gaactctctc	237540
aagcgtttgc	aataagaaat	gatgcaaaa	atgtctgga	aattatagag	ttataagtgt	237600
atcactacag	tttcaacaaa	aatgtgacga	aggaagaatt	tgtaaagag	aagactgtag	237660
aatgtgttgg	atgtttatat	gatatgaag	acgagaaacg	ttgttacaaa	ctcccatgtg	237720
gacatttcat	gcatacattt	tgcttgtcta	ataagtgttc	taaagctaac	tttagatgtg	237780
ttaaatgttt	ccaaaccttt	gatgacacaa	tttttagaaa	atgtccccc	actatacaat	237840
ggaaaatggg	tataaaccaa	acgataaacc	ataaggaatt	ggatttgttc	aatcgtgcat	237900
ttgacacata	tttagatttt	atltgtcat	ataacgtcaa	attagacaaa	aaatcaaaac	237960
ctaaacacaa	acctgaaaac	aaaaaggtgg	aagaagaact	agcaaaaaag	acagcagaaa	238020
ttgaagaggc	cataaagaaa	aaggaagaag	aactagcaaa	aaggacagca	gaaattgaag	238080
aggccataaa	gaaaaaggaa	gaagaactag	caaaaaggac	agcagaaatt	gaagaggcca	238140
tgaagaaaaa	ggaagaagaa	gaactctcaa	aatataataa	ataaattgaa	aagggaaaaa	238200
gacgactgaa	tgaagaatgt	gtcaagtgta	gagatatctc	aactgcagcc	ataaacatgt	238260
acaaagagaa	agtgagaatt	aatggtgtat	tactaaaaga	ttccgatcac	gagttggctg	238320
aggcgaaaaga	gaggttgagg	aaaattttat	tgctagaaga	agaaaacaaa	cttgacagat	238380
ttttgttttag	accgaaacga	gtagaagaac	gtatatctct	aactaaagat	gatgaaacgt	238440
tagccttcaa	gttagcccta	gaaaagaaaa	cggaggacat	aattgcgaag	aaaaacaacc	238500
aaaaaggcag	tgaagaagaa	gatggagaat	atactataac	ttctcatatt	gagaaactac	238560
ctcaactccac	tgctttggct	agtgtgtgtg	tgttaaacga	ataaataaaa	gtataaaatg	238620
taataatatt	gttttaatat	cattaatat	ttaccacat	gtctacttgt	tcgaatttgt	238680
tgtcagtatt	tggtggagga	gattggacaa	caacattccc	attcgacctc	gtccatacac	238740
gtcaagagtg	tgataaaaaa	agagagcaag	actactcatt	tttcattact	gaaacgtgta	238800
aaggagagaa	tattggtata	cattcgtatg	aacacacgtc	aaagattatt	gacacgggta	238860
ataatgattc	tacctcaata	gaggaactag	aagtactgaa	tatatacaaa	gctataaacc	238920
atthagaaaa	tatcctaaaa	ctcaacaaag	gagaaaaaat	tatactgatg	gatgtagaaa	238980
caatgatact	ggaaactcat	aaaattttta	tgaaggggat	tcttccgaag	ggtaaaaatg	239040
gaagtttcag	tacatgcgta	cgctttgctg	taaataagaa	caatgaacgg	cattactacc	239100
ctgtatttga	aacagagaaa	gaagcgttca	attctataca	aaatctagta	gattattata	239160
atgaaattgt	agctcacacc	aatgacaaa	ttaaataaat	aaaagcgtgc	gcatatttca	239220
tgtacaactt	tctaactctc	caccctttca	atgatggtaa	tggaaagaaca	gctagattat	239280
tgtatagttt	tctattgaaa	ggtaatggta	tcgtacctca	tttttcaccc	ataacacacc	239340
ctagggatca	atttgttgat	actttagtgt	attttagaga	acatggagat	ggacgacctt	239400
tattgtatgt	tttgctggaa	tcaataaaaa	ataagtaaaa	ttcatttttga	ggcattttatt	239460
tcttcatcaa	ttcatatggc	atcttgccag	ttttctgtat	tgttatctca	gcaataatgc	239520
gtaacacatc	agcagatgtg	cagattttat	cccttcccc	atccctcatg	gtatttctct	23

cgtgcttgta	aagctccttc	cacaggggcg	tattcgctctg	cttgtagttg	caatgaagta	239880
ggacagggaa	tcgcctgagt	acgtgggaca	gcactttgaa	gctcatcttt	tcgtccgaag	239940
aagaagacag	tacactctct	ccaacatcgg	tgacaatatt	cttccctccc	gacttggtct	240000
tgtacaatgg	agactcgcaa	tcggtgaaca	tggcgctcgg	agggaggagc	atggtttgca	240060
tgaacatgct	gtccgcgctg	aaaaagtcct	gctcggcaat	ggagaatatg	ttttccaatt	240120
tgcttataag	tgagtccatt	gctgctgctt	gctgcttgct	gctgttaggc	gtccagaaaag	240180
cgtgtgttaa	tttctcggcg	gaggactgtt	cttatataca	aattcgttaa	agggtgacgc	240240
ccacagataa	gaatgtggtt	agacttgaat	ctatttgaaa	ccatgacaag	gcattttctt	240300
ttgtaagggg	tgaataagga	ctagactcct	ctaccagaat	tcatgtgcgt	cattgcaagc	240360
aaaaactccc	tcttggtcca	agaattggct	agtgggcggc	tgcatgccag	tctgtatgac	240420
atcatttcct	tatgtgcaat	ggataattat	aatttgtaat	atgtgaagtc	gtcgggtccg	240480
gtccacccag	aaagggggcg	aatacacata	acatttctgg	gggtgtatct	agtgcattat	240540
atctggcatc	cagaaacgga	tgcaagcagt	atctgaaact	ctctctcact	tttgacatca	240600
atgaaaaatt	ggacatcaac	acgcatttgt	gtgggtggata	aaagggggga	accggctatg	240660
actaacaagc	atttcttgcc	taacctgcag	ccaagcaaca	gcatattaca	caatggagga	240720
cctaaaatcc	actatcgaga	gagtatatga	agaaagagtg	gagaatctag	aacaatggac	240780
aaatactgta	gaggaagaag	aaaggactgt	ctcagcaatc	gattctgtcc	tggaggaaca	240840
aaaaagggcc	ctggacgcat	gggaagcagc	gataaaggaa	cgagaaaacg	acctcgcagt	240900
aaaagaaggg	atatctgcac	tcgttttcaa	cgcagcagac	gccaaaacac	gtaaagaatt	240960
gataaatacg	tggatagccg	aaagggaaac	gtcagaaaaa	agaagaaaag	aagcaacctc	241020
taccaataat	caactgaaga	accagatgtc	atctctagtc	aacacaacca	aaacactcaa	241080
agaaaagtac	aacaaatatt	acagaagaag	tgccatactc	aacatgcaat	acatcaataa	241140
caaaagggat	tatgaagcaa	gtcaattttg	ggtgtatata	aacaatgcat	aagttttcaa	241200
ataaatttta	ttttataata	aaaggtgttt	taattataat	ttttgtccct	gatgttgtgt	241260
tttctatatt	tttactgcct	cctcttgggg	taagacataa	aaacggtggc	ggcggaaacg	241320
aggaacagaa	gagcggaccc	agccagaagc	atcatatccc	tggtcctggt	cttatatttg	241380
tcctcatcat	cgttatcggt	ggcagtgctg	tcctcatcat	cggtgtcctt	atcagtgctc	241440
ggatcgctgt	ccttcttttg	tcccattccat	acattcatga	cggccaggac	gaggatacca	241500
attgagatag	caacgatcaa	aaagagaccc	atgcgagcca	tagacatgga	gccttcaaga	241560
tcttccatgg	tgtaagaagg	gccagcggcc	tgggctccgg	tcctgcccga	aggaagagtg	241620
ttagtcgtgg	tgccattttt	ttttctgttt	gatgaagagg	tacgtcaatg	taacgtaaa	241680
acctgttggt	ttatcgtgta	cggtttttgt	caggacacct	tacgaacctc	tttgtctttt	241740
tagacttact	cagcgttagt	tgtcgcagtt	ggtcatgttc	cgtcaattct	gttactata	241800
tcttcttcaa	cgccgggtta	acgacaatct	tagatccacg	gcgtccgctt	cggcagcggc	241860
ctcattaaaa	ggagatggaa	ctgaatttat	aaccggagaa	ccaccttctc	ataaaatgag	241920
gggaccttct	tatagcgttt	taggacctga	tccgtgcgag	gacccagaaa	gggtatatgt	241980
tgatattgta	tggtctattt	tgcaagacaa	taataacacg	gtaacaaaag	aatgggaatt	242040
gttttccgat	aagttagaaa	aattgggtcc	atggattgat	aggagcggaa	ttgagaataa	242100
tggcgaagga	gaagaagatg	gagatgaaaa	tgaagacggg	gggtggaaatg	ggggaaagaat	242160
tgaagacaga	gaagcacatc	gacgaaaaat	gatgaagaaa	ttgtcctttg	ttggaagaga	242220
agatccagtc	gctgtagatt	taccacagtg	gcgagaaaac	agtagagaat	ttgcacgtcg	242280
tttaacactc	aaggaattgt	gcgatttaat	agttgaatgt	ggatgcatca	aatcaaaaaga	242340
ggaactcttt	gacttcattt	ttgaagaacc	gtgggagatt	aaagaggctg	ctgacgttag	242400
gggtatggca	aattcaccaa	aattcaccaa	ggaatcatta	attgactggt	tttttgattt	242460
cgacacatat	agtaaatgtg	tagtattttt	tgaagcagtc	aactggtact	tgaaatctca	242520
agcgtctcca	atttcatttg	tactagatga	tatatattgt	tgtgtctttt	cctacataag	242580
acgccaaaac	tttttaacta	gggcaaaaaa	cccatcttta	acagtggctt	catccttttc	242640
ttccacgccc	gacacaaaag	ttttggctat	cgacagatgc	gtgcaacact	ttttaaaatc	242700
agacattaat	attagccaga	tggcattaac	tgaaggagac	tgcttcttcc	ctcttttaac	242760
tgaatggccc	cggcaacaaa	aaaaagtaaa	caccttccct	gacacaatga	agagacctac	242820
cttatctctt	ctaccttcca	cctcctcctc	ctcttcttcc	aacaacaaga	gaaagagaaa	242880
tactgccgct	gccaatattc	ttcttccagt	gtacaggagt	aacttttcta	cagcatccaa	242940
taacaagaga	ctgaaaactg	atgatgggga	aaatgcatca	gcctgtattc	ttatcgaagg	243000
gtatgcgaat	ggaaaaataa	gccctataag	gatttatggt	agaaaatcaa	ctattattcc	243060
agaagtgttt	aaccatcttt	tgttccctgt	cattgcctct	aaagacactg	gtgcgaatat	243120
cttatttttt	atcaaaatga	aatcctttgc	aatgcctctc	ttactcctcc	ctggactttt	243180
tagacacccc	aaacaatttc	tcaacggggc	gtgcaaatgg	atgactctag	cagaaaacaa	243240
catcaacgac	aacaacataa	actcttccac	gatgtggagt	tacacgctag	cagattattg	243300
tcctctgggc	tattacaccc	aagagagccc	tcaaccctat	cagacatgcg	gcaattttac	243360
ttcgactaca	aacaagagac	tacaaaacgt	gcagccatta	tactttttaa	cactcttttg	243420
gaatactaca	ggacaccttc	agaagagtg	gaaattccgt	ttaatctctt	gcttaatgtg	243480



atgaataaca	agtggagtcac	actcattcca	ggtgtcaaaa	taagtgcagg	tatcatatcg	243540
aaactcccat	ggaccatgaa	aacaatgtac	gagattgttt	cttcgcccaa	taataataat	243600
aacaacggag	actactattc	tacatgcagg	cgaatggtaa	tggaatatcc	tatcgggggt	243660
tattgacaca	cgcctgccat	aactaataag	tatccacgct	ccagaatggt	cacctgtaca	243720
aagggcaag	accaccagaa	gctatatgac	atctctagac	aaatgtttga	tataatgaaa	243780
gcaaatggac	aactctgatt	attattatta	cggttacgaa	aattcccca	agactaaaaa	243840
attcaatact	gcactgatga	ttgggttcat	tttattttatt	ttattaatca	tcggaatttg	243900
gggtttattt	agatctcgaa	atgcaaccac	ccaagagagc	aaaactttct	ccccaacaat	243960
ctcctcgacc	ccaactacat	attctggcag	ctcaaccagc	aggggtccag	gttctggatc	244020
tggaaaacaaa	cccaaagatg	acacatccgt	tgaaggaata	gaccttggtc	tactgttaaca	244080
gaaaaaagag	taaaaggcga	cagctcgctt	gccaatgtgc	ctgttatcgt	ctctgtgggt	244140
tcacgaggtt	gtcatcacca	aaggtaacct	ttttttttgt	cctcgcgcac	aaaacgcacat	244200
cttaataaacc	aagcaacggt	cgataaagaa	aaaaactcgt	catggatctt	tctttcactc	244260
tttcggtcgt	gtcggccatc	ctcgccatca	ctgctgtgat	tgctgtattt	attgtgattt	244320
ttaggtatca	caacactgtg	accaagacca	tcgaaaccca	cacagacaat	atcgagacaa	244380
acatggatga	aaacctccgc	attcctgtga	ctgctgaggt	tggatcaggc	tacttcaaga	244440
tgactgatgt	gtcctttgac	agcgacacct	tgggcaaat	caagatccgc	aatggaaagt	244500
ctgatgcaca	gatgaaggaa	gaagatgcgg	atcttgtcat	cactcccgctg	gagggccgag	244560
cactcgaagt	gactgtgggg	cagaatctca	cctttgaggg	aacattcaag	gtgtggaaca	244620
acacatcaag	aaagatcaac	atcactggta	tgcagatggt	gccaaagatt	aacccatcaa	244680
aggcctttgt	cggtagctcc	aacacctcct	ccttcacccc	cgctctctatt	gatgaggatg	244740
aagttagcac	ctttgtgtgt	ggtaccacct	ctggcgacc	aattgcagct	accgccggtg	244800
gaaatctttt	cgacatgtac	gtgcacgtca	ctcactctgg	cactgagacc	gagtaataaa	244860
atcgtgcttt	tttatataga	tagggaattt	taatattaca	acaataagaa	aataaaacaa	244920
ttgaggaaat	ttataccata	ttttattgac	ctacttaacc	ttcttgctat	acaatgaatg	244980
tttaggtgac	tggaaaagtt	tagcaatatt	atccttgaac	gggaaacatg	caccaattac	245040
aggcgcaatt	tcatacgctc	tcggcctatt	ggtcttttcc	tggtcataca	ttttagatac	245100
aatagacaaa	aatggaatgt	ttgtatagat	agaattggca	gacaaatctg	cagttctctt	245160
aatcaaaatg	gacacaatgt	ctattaacaa	ataagccaac	ccaaaagtc	tggcagtttc	245220
tgaacacaa	tcaactgttaa	taaatctcagg	agctgtatga	ggatggttac	taaagaacct	245280
ctcatcagtt	ccccaacatt	taaaattgta	gtacttttta	catggtacaa	ttaaaccaaa	245340
atcaatcatc	ttaggttgac	cagttattcc	atcaattact	atattgtcac	tttttatgtc	245400
cggattcact	aatccttggt	gagacaaccg	agtgacaata	tttacaattt	ctacccaaac	245460
aaagggcaat	tggtttaaca	ttctctccct	cattttttcca	acgatagcta	tggctgaaat	245520
tgaatccgta	atgggtttct	tgcattatga	tgttagacct	tcaggcaggc	ggccagtagc	245580
ttagaagcatc	tgcacaccgt	acagagtatc	ctcatccta	cacaagctgc	catgatcttg	245640
catgagctca	gcggctggct	tggaggaagt	agtcgagggg	ttaggttgct	gtacaacatt	245700
ctcgtccatt	ttacatttca	ggtctccatt	taatacatca	atcacagaaa	tgcttgcaaa	245760
atccatctcg	acacaaaaac	cttcaacaca	catctttctc	acacctactg	cgcctttcat	245820
tcttccctca	agagcgtgac	taaaaacagt	ttcaaataca	aattcacagt	acatttccct	245880
gtccgctaca	aacttgataa	cttttccagt	tccaagcatg	taataatccc	cgactttaac	245940
ttcgagatat	aattcagatg	gtccaatcat	tacgacttga	gaagcatatt	ctggttggac	246000
gtgtgctggt	acaggaatat	ttctgcggta	actttcccat	ttcttacatt	gggcagtgac	246060
ctccccaag	agtgtagttt	tcttctccaa	tatagattca	catgctccag	gggaaagctt	246120
aaaaacattc	tttgccatgt	gatcgatgct	catggttttt	atccaccctt	taccattatt	246180
cttgacatac	ctgttccagt	tcaagagagg	gctagtgtct	aaaacggata	ggtttttact	246240
accaaaccac	acagggcacc	aagatgaagg	gggttgttta	gtacggttgt	tagaccacaa	246300
aaacttggac	gctttttcct	ttgcgtcaat	acagctctgt	tttatggtct	cgtagtggga	246360
cgacacatct	tgcacgtcag	aaatgaggcc	taatttttgcg	gcctgtctaa	tcaaatggaa	246420
cggagattct	agaccggctg	caatatgggt	atcagcctct	gccactgcaa	agtaaacagg	246480
gggtttttct	agcttgacc	acttgtaaat	ggaagaaaag	ttcctcttta	ctacatttgt	246540
ttcagtcacg	gtatcacaa	aagatttcaa	gtgttttggc	cccttgacat	gggaacggag	246600
gcagacagac	ggagtatagt	cttatgcctt	caaattgaca	gtagagaatt	ttgcacaatt	246660
tggatgagag	aatctttttc	tgtactgggt	gtcggcattg	gcgcggtgct	tcttcaacac	246720
agacgcggca	ctaacagaag	gcaattgctg	cttcttgata	atgtctgtcg	catacgttgg	246780
atttaatggt	gcaaattgat	tttcatcaat	agtaataggc	ctcttcttct	tatttctatt	246840
aaagtgtgaa	ggtgtgctct	cgtagtc				



cattttaacg	acgtttttta	tactctgctc	gggctctggg	tcagaggggg	ctatagaaat	247200
cactcgtgga	tagttccttt	atataatttaa	ccaatttttc	aaacaggggt	tattaaaaact	247260
actcttcttt	tctgtatata	ttaggtacaa	acacacaata	caggtcaggc	ctgcaaagga	247320
ctgggtattt	accagtcgga	atataacagt	caaaaggctt	atcttccttg	atctagagct	247380
ggaaatgagt	gagtaaaaaac	ttgctgagac	atatactgtc	tggccgcccc	ttccttatta	247440
gcctgaatag	aatcctcgaa	gcttacaact	acattaaatt	tccccatacc	gttctggggt	247500
ttcaacatat	ttgcacatcc	aaacgttaca	gttttcatgg	atactacacc	ctcgtctcct	247560
aacaaatcac	agttcctact	atttttgtca	gccgcattcc	tttgccctct	gacagattct	247620
gttacagcgt	cctggatttt	cttgccccac	agagctttta	tagatctctc	ggacaattgt	247680
tcaccatacc	ctaaaacagc	acctctggca	gtaatggggc	agtaattaaa	acagacaaca	247740
gaacctcctt	ctctccaaat	tctggtagat	agattgtccg	cttctttatt	caacaataaa	247800
cttcttagac	agtttgaaat	aatgtccaat	tctttactct	tgtgggaaaa	gggtcctcca	247860
ataaatcgac	caaacacacc	cgcaccagaa	gaaagggtct	cgttagaaga	tggttcatta	247920
aacatcatat	aaaatttgac	atcagaagga	ggtttcccg	tcttcaaaaa	atcccagaag	247980
ttagcagcga	tgggtaaaaat	ctgtacaggg	ttcaccttgg	aagctctaac	ttctattaca	248040
gcatttgata	tgtcagtttc	catggccttc	attaatttgg	ggatattcct	attaacaaaa	248100
tcacacatag	gtattttcca	ttcaggggtg	atgtgggggt	aaagaacaag	ctctagaagc	248160
actttaaaga	tgtaatcgcc	agtgtattgt	gtgactggag	tgttgattgg	gtatagagat	248220
tcttggtgct	tctttccctt	ttctgatgct	tcatacaaaa	catccatgcc	ttcacagtca	248280
tcgtcatcat	catcatcatc	atcttcactg	tccgacattt	ggtgggcact	attattatta	248340
gtgttcttga	cactgttacc	aattttcttg	tacatttttt	caatagttaa	aacattagca	248400
ttatcagcac	tctcattctt	cattatgttc	ttcagtgaat	gatccctctc	cacgttggtg	248460
tgtttgagca	cgtaagcctt	gacgatcttc	ctccatgtcc	ttataaagtg	tatgactgat	248520
gcataattct	taccgcgtaac	aggtttatga	gtcagcgagg	cttggttagag	cttgaaggcg	248580
tttgctccagt	gattatatac	agtcgtgtac	aaggcctcga	tggtttcctt	tgccagctca	248640
ggggatgtag	ttttactccc	atatttcgaa	tccatagtga	gtagtctctg	ttgttgctcg	248700
agaatgtcct	tcaataaagg	gtccaacgta	ctcttattta	aaattttgtg	ttcgaattca	248760
tatatcagcg	aacaagtttt	catgtctttg	tatgacacac	aacatctcac	aagacagatg	248820
actgcagtc	tcagaaacgt	atcacttttc	ccacttcttt	ctttcttcgt	gtcaagaaga	248880
ggtataacgt	tcttgtacca	gtaatcgagt	atagattctg	cattggctgc	gatggtttct	248940
ttacacagct	ggggtaaatt	agatacagtt	ctgtcctctc	cttcaaaaaat	cactttgtct	249000
tcttctacct	ggcggtattg	tcttttgggt	gtgtttttgt	ttccagagag	agtaattgca	249060
gaatttttct	gttcaactac	cagaactcta	taaagatttt	ccactttttg	gaagagagat	249120
ttctggcggt	catcttcaac	aactggagcc	atgtctgtac	cggagccaac	tttggtcaca	249180
actaacgcgt	cggtgaatgc	gtctttttaa	gccattacgg	tccatgccat	atctcaaagg	249240
ttgccaatga	ccaacataaa	tatcggcaca	gcatacattg	aattgcctaa	tactataaag	249300
gaaggactcg	ataacccgaa	acctatatac	tttgatcctt	tatctaaaaa	atataaaccg	249360
gatacttgca	ctgacgtgct	ggactcggtg	gacgtgtcgc	tagaggacta	tagaaaaagt	249420
ataggatggc	gtcctcgggg	ggattcttta	caggaataga	tgaccttttc	aagacagtga	249480
ttcaacaaga	aaaacaagag	aaaaataaac	caactcaagc	accagaaaca	gaacccaaac	249540
cagggccatc	tcaagctcca	gatccagtc	cagacccagt	tcctaaaaaca	ccaaccaatt	249600
tctgtccttc	tccacctaat	cctctccctc	ctcctcctcc	tcctcctcct	aagccctcaa	249660
gagaagaacg	gctaaagacg	tcaaaaatac	gtttaaacaa	agctcttagt	gatattgttg	249720
aagccacaaa	cgagcgtggt	gatgcgttga	aagagaacca	agcattaaat	acagaatatg	249780
acaagaagga	taattacttc	cagggtttta	agtgtcgtat	aacaccttct	gtaccaacag	249840
ctattatagg	cgcacacgtg	aaacaggtgg	ccaaaagtag	cgaaatcgaa	ctggccgtga	249900
acgaactcga	tataaaaaat	aagtgtctct	tagtgtacaa	cgaaaatgag	tcgttaaaat	249960
ttttcaggga	ccatgagaac	cttatactac	aaattgccgt	ccagttattc	ttagggcacg	250020
ataacaccaa	atgcgtgggg	gcagaaatat	gtgttaaagg	caacgaaaaa	aacaagtttg	250080
ttacaaaact	ggtgttaaaa	aaactcccca	atgcaccatc	ctcatcttca	actgtgctag	250140
aaatttagagg	cgctaccaga	aatttactgg	agaataattt	caacaaggga	gaaaaataaca	250200
ctgtcaatga	aaacaaggac	attcctcctt	cagaacgagc	caacctggac	acgaccaagg	250260
cagaaatatc	gcacgtcttt	tccactctac	acagactgga	cactaaaagg	aagcttttct	250320
ttaaaggcaa	cactttttat	caacgaaaaac	caacattcga	taataaattc	aggtggacag	250380
aagttagatg	gtggacagaa	agtgaagcat	caaaacaaac	cactaaatcg	ctagacaagc	250440
caacggacga	caatttatc	gtgctacccc	attctttcaa	taatttggca	gaccacttac	250500
gtttgaaatt	taaaaacgtc	ctctataaaa	atagtaccgc	acatcccggc	aaacgaaatt	250560
actacaagac	tcaagagacg	ctaataaatc	cccagattga	ttcggcgaaa	gagtacaaga	250620
tggtctttgc	agaaatcgac	aagtgtttgg	atgttctttt	ggccataggg	aagaatgaca	250680
aatacacaaa	aagcactgtc	atacaatata	gaggaaagtt	tagaagggtat	ttaatattct	250740
gctacgcctt	ttatgctcta	aataaggcaa	aacattctcg	cgcagtatcc	cctctaccat	250800

ttaattttctt	taaccttttc	tccttcatgt	attgtcatgg	tccgtttctc	cattccgcc	250860
gttttttgtc	cacattgacg	ttcgtctatc	aacacatgtt	tttcccatg	ggcacagccg	250920
ccccatccgt	ctcagccaag	cggctcatgg	atatcgattc	cgccctaata	aaaggaggaa	250980
agggggtggg	tgtgagggat	tttggttcac	cttcaaaaac	aagtctccat	acaagaacat	251040
tgggtgtctt	cttaggtttt	gctgaaatgg	ctatgggaac	aatgacggct	ctcttatctg	251100
gtgtagaagt	gcgtgtatct	ccagctctcc	aacaaaggat	atctaaatcc	ctagaaagat	251160
ggtgtgattc	agtcattctt	ataatattca	cctttgtttt	attccacaga	ttcagtgggtg	251220
cgaaaaaagt	atcactcgaa	tcggcgcttc	gcctcatcat	ggggcagacg	cacgccaca	251280
caaataaggt	gagggccgcc	aagagatgcc	gaatagaagc	agcggaaatg	gaagggtgtg	251340
aagaagaaga	ggcgggcctg	acactctctt	atgcccatct	attgggtctt	ccttactcta	251400
tacaaaaagc	cctcggatta	cctgtcccta	agataaaccc	tctcatgaca	gcattctctt	251460
ctcaatacaa	tttaggggat	ttttagggcg	tggaacaact	tctaaaggct	aagagagagt	251520
ttccagccga	aggagaaacc	gcaggatttc	tcggcatgtt	tgataatcta	gtgaaagatt	251580
ctattgacaa	atactacggc	gaaggagcct	tttcagacgt	ggttgaaaat	gtaaaacaag	251640
gcatggaaca	aaacacaccg	tatgacacat	cttcagcgtt	gatgacacct	atccctaaag	251700
cattctacga	agaagaaaag	gatgttccac	agcaggaaga	aaattctaca	caacaaagat	251760
atagattgaa	tagagacgtg	gaggaatatt	taatggcttc	tcctatgaag	atgggtgttg	251820
tgtctatact	cgataaaaact	aacccaaaaag	aacgtttcat	gtctgttggg	gatattgccc	251880
ttctggccgt	gtggtgcaaa	aggaacgtac	tgaaaaagga	ttggaacgaa	tacgctatcg	251940
ctaaaggcaa	ctacgaatgg	cttgggtgcta	aaatgtgcaa	ccatttactt	ttagctgatt	252000
tagtgaattt	tggaatatga	ggtgacttga	aaataaccaa	taaacttgac	acaaataaccg	252060
acacctttca	cagagacagt	gatagattac	cctcagttgc	agatcagaaa	aaattttataa	252120
aaaacacatc	cctatctgat	cgaaaacaat	tgggccctgt	tcactcgtgc	gttaacgtga	252180
gcacccgaac	ccacgtagga	agagtgactg	caacatcatg	ggctgtcgat	gcgcttcgta	252240
cctatacaag	aggtgataaa	gacatgtttg	ccgccctatc	ttcatcgctg	gatattgtacc	252300
actctgggca	cacgaattca	gctaattttg	ttccatattt	tagtagaaat	tacctatgta	252360
acgaacaaga	gaatggattg	tgggggtata	ctcgcagaac	ctctgaaaaa	ttggccaaag	252420
aagaattggg	aagaggacgt	ttagggggcc	tgaataaggt	aggggtggct	aaaacagAAC	252480
tggctgctgc	agccattgca	atttcttctg	ccttagatat	gggggaagta	gaagctgtaa	252540
tggacgactc	ttctaaagtg	agaaaaatag	cctccacctg	cttaaatgtt	aatgcagcca	252600
aggtctcggc	cgccagagaa	aaggcgagag	aagctagtat	taaacgtctt	cttctggcca	252660
ctaatgcacc	agcagcttgt	tcattccagaa	acagtaacag	gtttctcttc	aaagatttgt	252720
gggggttctt	ttctgaccca	gacaagcgcc	agaagcttat	aaagggtgaa	gcagtttctg	252780
tactatgtcc	caatacagga	tttcttcatg	ctgctgttcc	tgattttgtt	attgagtatt	252840
ccttcgaaaag	tgaacctctt	atagtgagat	tacgtttgag	actgattaaa	cctgaaaaac	252900
aagacgaaat	ggtatgccct	tcaacagctc	ccgaagctaa	taagaagagg	aaattagtaa	252960
ggaataatca	agacgctgta	ctgacgttgg	atgatgaaga	taacatcggt	aaatacaaca	253020
aatatgatata	ggttgaagac	gaggaagcgc	gtgaaagatt	acgccaccag	gacaaacaat	253080
cggttatttgc	agcccgatc	agtaaagtgt	gtgagcggaa	aaatccaaag	aaaaaacgtc	253140
gtttagaaga	ccctgaattg	caaagtgtgg	atgaacaatt	gatacgggaa	ctggctgcca	253200
ttgcctactg	acgagatcta	agattttgta	atatattatg	tgtcttgca	acctaataatc	253260
ctgaggatta	ataataataa	caacaactgt	tcaaaaatga	gagacgatac	ttttaacca	253320
gaaactgcgg	tgaacttgt	acgatggtat	acagagtacg	attgttgttg	cccattgggt	253380
aaccgcgtgg	agcgcttct	aggatcggtc	ggaggaggcg	tggacgccac	gtctgtgcga	253440
agccgaccgg	ctctttatga	agaagataag	aaggagata	aatgcatacc	ctttaggata	253500
acgtccctta	ttgagggtat	acttttgga	agggctctaa	ctaaacccga	tttagctgct	253560
gcagcttttg	atgtatcaga	aaagctggtg	tattgtagtt	gtaataacac	tcaaggcaat	253620
tttgatgtct	cttcaatgac	catatggatt	gatggcaata	atagtaaaaa	gtatgaagtt	253680
acatgcccgt	catgcactgt	cgagaaaatt	agtggagggtg	ccgaatctat	tcacaagaaa	253740
ccatgtcttc	tttctgctt	ctttaacaat	ctggtagaga	aagaagcctt	cgccgaaaga	253800
attgaactca	agaaattgta	cctctcctta	ctaacgggct	cggcagccgg	aggaggaggt	253860
atgtacaagg	acagctccca	acaatcttcc	ttcaacggct	cttgacgctc	gttgtgttct	253920
cacacatcta	aaaaggacaa	gactcgttta	gaggctgaag	ttttagtcag	taacaagata	253980
aaacacacat	caagattgca	gcctaggtgc	gtctgttccg	atctgttata	tgccttatgc	254040
tccaccacta	acaactctgc	atcttacgca	tacaaggcaa	gaaatttgtg	tgttattgaa	254100
ggtggggaat	ttttatattt	taaatacaca	atcttgaag	agaatggacc	tttcgactcc	254160
aaaacgaccc	ttcaatcatt	agttaataac	gagcctgttt	ctgagacaaa	ttcatcgcca	254220
ctggccgctt	cttcttcttc	tttagaagac	gacgatgatt	gttgtgatga	tgatgacgat	254280
gatgatgatg	atgaagacga	aaaaactaag	aagaaacaac	ccaagaaaca	aaccaagaaa	254340
caaaaaacaa	caacatcaac	acttccacct	atcagcaaaa	ccaatcacga	caacatgttg	254400
atgaatgtac	ttaaaaaaag	agctgttaat	ggaaaacgga	aatgatgga	ttctttgtca	254460

ggaaaaaagg	gccaaacactc	taaaaaattg	aaaacctccg	ctgctgctgg	tgggtggtgct	254520
tcattccgacg	ttgttgacag	agaaaaatgag	gaagagaaca	acccctcttc	agtgaagtccct	254580
actaacaata	gggatagaaa	agactatgtg	cttccatgcc	ctcaaataga	agaagtcaact	254640
atTTTTTcac	aacacaggat	gaacaataac	aagttggcag	aaagtgtagt	caaacattct	254700
gttggttatta	atggaaattg	tttaaacttg	tttgttactc	aacacagaaa	aaagtatatc	254760
ctgcctcacg	aaaatattct	tttttgccca	cctttagtcc	agcatgtagg	atttaacaaa	254820
tttcgcattt	tgactggcgt	ttcttgcttt	tttgatagaa	ttgaaattgt	ttttcccgac	254880
caatctgact	ctgtggtgtt	gagtaataat	gctgccatt	cggctattct	aaggctattg	254940
tcatacataa	gagaaaactc	attgaagcga	agtgtgagga	ctgcttcggt	gaaaggaatc	255000
gattttgtcg	tgaaatcaca	ggacactaat	ataggcatac	ctttaagcaa	caaggaaata	255060
agagaacggc	aattatgctc	agcttcaacc	ctgagtatgc	tagctggttt	gggaaatga	255120
tcaccgaccc	gggggtcatt	ttacccggtt	ccaaggatgt	tgtactcttt	ggatcacgag	255180
gacaatcaga	tgtgggaata	atgacactgg	accctcacga	tttgatata	aaaatcacat	255240
ctaaacgcat	aggtgtggaa	gaaagactag	ctcaatacaa	tactctacct	atggtattta	255300
cacgggcaat	ggaaaaggaa	ctaaataata	gtagaaatat	gaaagagtca	atattcacgg	255360
gaatatTTTT	agacaccggt	tcggcaatct	tcgaagacaa	catgttcaac	ggaggagggt	255420
cagctttgcg	cttaattaga	tcccccgctt	tgaattctgc	tgtattttca	agcaagaact	255480
acatcatcaa	acaattgccc	accataacca	aatctctaa	gagaagtcaa	gctagagata	255540
agcaagtgga	taaaacaaga	gagaagatag	tgggtggattc	tttcagcata	cttagtgcta	255600
tagctgctca	agtaatgcac	ctcacagacg	gagagatgac	gtacgtcccc	gatgggcaact	255660
gcgttaatgt	tgtcatgtca	gagaccaatg	cttcgtccat	ctacttgatc	ataaacgacc	255720
ccactgggtc	gggatggaaa	attatgccta	acaatttcaa	taaaacactt	gaaatgagag	255780
acggtgtaat	agatagagta	gaaacattag	tggagtttgc	gtgcaagtgc	gtcgcattcat	255840
ccttgattaa	aaggggcatg	gatttagtgg	atatgcaaag	aactataagg	tctatggatt	255900
tcctccctcc	agcttcttct	acttccaata	atactcctag	agtagcgata	atgacatctg	255960
gaagtgtac	tactacggc	attggatcct	tgtccattct	tgcagaagat	ggatcaacac	256020
accaccaa	caagctatcg	gaatatagga	ctggattatc	cattactgaa	aataatagag	256080
aggtgtcttt	tacggtagaa	ccttcaatag	acggcggttca	agcagagcat	cctctatccc	256140
cttctattct	tcagtgttga	cctcctctag	ttaaaaggcc	agaagtggta	gcagcagcag	256200
cagcagcagt	agtagaagaa	gaaaacgggg	acaataaacc	ttctgataaa	gataacgaag	256260
acaagtacag	tgactactgat	ttttggtcta	atgtccccgt	cacacctcta	attacaccca	256320
gaaaatggag	agcgtgcaaa	ataaacgata	gggcaattgat	tagtagttgg	aaaaataatc	256380
tagtgaaact	ccacaaatat	gattggacaa	ataaaactac	aaaggttgat	tattttgata	256440
agatggctgc	ctttgttgcc	ctcatgacct	ttagaaaatt	ccaagacata	ctagcggata	256500
actatgttcc	tcctcaaacc	ccttctcagg	gaagtgaata	cgcatgacac	atgtctaaccg	256560
tggctacact	ctttactgac	gtgtacggtt	ttgaatcgaa	tggaaataag	ccattgtttg	256620
ccctagaaca	gctagaaaat	gaaaccggga	ttgaaagcat	atacgtccta	aatatcatag	256680
gaaattcccc	tgtgtgtaat	tctgtcaggg	tcgtcagact	ggaaaaggaa	atgagtctcc	256740
tcttgaaggc	gaagcagtac	tttacagaaa	tggccatacc	tcctattaat	gaaaaatgca	256800
aatggacaga	taaggccccg	tcattctgtaa	aggagtacaa	gtatttttgt	gatctaacag	256860
cacccatttc	aaagagacct	agaaaagata	acaacgacgg	cgggtgtggag	cattctgcgt	256920
tgacttatac	acctagtgct	atataccaca	ctgaacgttg	tttagtccat	ctttactctg	256980
agccagaaaa	aataacagaa	cacgtatctt	tcaacaagga	tttgaaacata	ttagaaattg	257040
gaaaaaatat	taccaaccaa	taccaaaaca	actacaaaag	catattcgaa	attgtggacg	257100
ttcccataat	tgtcgcctct	atgtcatcaa	caaaaacaat	gactgtaaac	aactacataa	257160
tttcaacacc	ttctgccacg	accaagtttg	ttcaggatcc	gccaaaaaca	gggaaacaac	257220
ttctggcagt	tgaagaggct	agaaacttta	aactcaaact	tgctcttggt	cctcctcctt	257280
atTTtaggga	caataagcgc	aacacaactc	tttgttcaca	aataactgaa	caaaattgcc	257340
gctcatcttc	tgaaggtggg	cgTTTTTcat	gtccatcaga	gtcacttatt	ctcaagtact	257400
ctaattctct	taaaaagcgc	gcactggaa	aaattgcccc	agagactgag	actagatttt	257460
tgtcactagc	catgtaacgt	gtctcgatat	atgacaattt	aaacaacctc	ttaataaaga	257520
ggataattat	cataatagaa	aattaggtaa	aatgggagta	cagaagaata	tcctgggtcgg	257580
tgggtggtggt	ggtgtatcat	tgttattggg	tgttggtaca	cttctaggaa	cagtaacaga	257640
aggagcaccg	gcagtccac	ctttttcatc	gtcttcttat	tcctttactc	ctgaatcgag	257700
tgttttctg	gtcgaaggaa	atcgtgtttt	aagtggaaac	aagaaggaca	ccttaatcaa	257760
cgTTTctggg	aaagaagatt	cttattatgc	taattccata	ttcagacatg	actgttctga	257820
aactcgttct	attcaattggc	cagaaaactc	ccctttgggc	ttgaacctta	ttttctgttc	257880
atgtgcgagt	catgaacatc	aacaccgtac	tcatgaaaca	acagaacctg	acgatttatt	257940
gtgggacgga	tcaagaaaaa	ctaccaccat	aattctacct	aaaaaatggt	ggtctgatgt	258000
tgtgtggaca	tctttatgga	gggataacga	ccagaagtgt	gggtgcgggc	aggcatttgt	258060
ttcttctctt	acttctacgc	agaaagaagt	ccaaggggaa	tggcttgctg	ctcacactaa	258120

cggaagaca	tctgagggtg	atactaattc	agcctacctt	ttcataagcc	ttcaacgaac	258180
tacactcaag	cctatcatca	ctgacgtcac	agaagataat	atgatgatgg	gaagaatgtc	258240
aggcacaccc	atgaacccta	aggatatgac	atattttgtc	aacgattttt	cagacgatat	258300
aggaagtact	cctcagtgtc	ttgtatcgaa	ttcggacatc	ctgaacaaga	gggaagaatg	258360
gatagctggt	tgggggtgtg	cagactctaa	agacctccta	actaaacatc	aactggggga	258420
gcgggaatat	gggagcgaag	gaagaagaag	aaatcccggg	gttgaggagg	aagaagaaga	258480
gagagtggaa	gaagaagaag	aagtagaagt	tgcgctacct	tacattaaga	aaagtggaaa	258540
acttatcgga	cctcgtagaa	gacctttgac	aacaacaaca	accactacta	ctactactac	258600
tactaatcct	attgttagag	aggttgtgga	agattttgat	tacgagtctt	ttaatgaacc	258660
agaaatcttt	ggcagtaact	caaaaacttc	cttcattaga	tttcttgatc	aaaaaaattg	258720
gagacttggt	atcatgagca	gagtttcttc	ttccatcgcc	aactttaaaa	ttgaacaaga	258780
gtcatcaaaa	gccttatatt	gtttggcagt	ctgggttggg	gatgaacata	ccctaaatt	258840
cagacttagt	gtatggaaga	actggaagcc	ttttacttct	gcacctatta	ttgtccagaa	258900
tgtaggttat	tcctctgatg	ttttctggca	tgaactctct	agaagcaaaa	ttgttgatcg	258960
gtcaaggggac	ctgatagaaa	caaaagtgac	aaagaaaatt	ggggaagatt	gggctaataa	259020
aaaacaaact	gtagttgcta	tgtttatttc	aggatttggt	tgtataacag	taacagttat	259080
ttctatatatt	tcaattgtaa	tatattacaa	aataaaaaatg	cctaaattct	aatacaatgg	259140
tttattcatt	ccttattcct	actactagt	tatagcacat	gaaacaaaga	aagagacacg	259200
cttcccttgt	tccttaaaca	atatgtttga	tacatttttc	acaataaatt	tgtaactttt	259260
atccattact	tctttacctt	ctcctgatat	cttttccaaa	tccaccacag	ttccaacacc	259320
agtaaacatg	ctctttctga	tatccaatgt	tgaatacttg	gcaaattcat	gcccttgcac	259380
ttcagtcatg	gcaatgatta	tagcaccata	cattttacat	tttttgaata	gaggatatgt	259440
ggcaaagtgt	ggagagaata	tctttgtggg	aagaccttct	tcttcctcaa	aagtactttt	259500
cagtgtcctt	ccagtctctt	ttacatgcaa	agaaaaattgt	acccttttca	ttggatgaac	259560
ttgtccacag	aacaggacat	cttcagacat	tgaaaagtgg	agattgttag	taggtgaaat	259620
tgtctttctt	ggtgccaaaa	gactaatcgt	atcagatggg	gtttctgggt	tactttcaag	259680
aatacttttg	tccttaatgg	ggaattcact	aacaccagaa	gctgctgcta	tttttgacat	259740
gaacattaac	atacaatata	cattagcttc	gtctgacata	cacagccatc	ccttttctgc	259800
atctacatgg	atattttctc	ccttctcttg	agctgtgcat	gtggacgtta	caatagaccc	259860
atgtttcgat	agaccacaag	tttccgtagg	acgacaaaa	ttaccagtcc	tacgcaagtt	259920
gtgctgcata	ctctttacata	caacatccat	gtattttatta	accttatttt	gattagatgt	259980
gtcataggca	tttttcaaaa	taccttcaat	gttatttgaa	aactcatccg	cgcttgttat	260040
aggaagacgc	aatttgacat	ctctttctcc	cccgtccttg	caatgggcaa	aatctttaga	260100
ctcgtaaccc	agatttggtg	catgagtaga	attggtggta	attgattttg	ggcgtacata	260160
ctgattcagg	cacggattgg	gagatggcaa	aaaggcgaat	gaagaattca	aaacgttcaa	260220
tttttcatac	actaaaaata	tataatggac	ataaaaattgg	aacacaattg	tagccttggt	260280
atggggtgca	atatcaaaca	acaacatttc	aatagtggac	tcctttgggtg	ccctattcac	260340
aaaaactggg	tgtattttga	tatagtcttt	cttgttcttt	tgtttcgtct	catattcttc	260400
acacaacttt	gaagagggct	gttttacaat	accactggct	atagagtagt	gtgtgattga	260460
acgaacgata	gcagtgtata	gctcaatcat	tttcttggtt	cataatttct	cataatgttt	260520
agccacatct	ccattattaa	caccaaagaa	aaagtctcta	atgtttttta	gttctgtttc	260580
tagcccatgt	tgctgaataa	ccttagcagt	gttggccatc	caagacgcat	taaacgataa	260640
agattttccc	gatctactta	ggatgaattc	ttcagcggca	gctaccacat	ctttagaagg	260700
gtcataggca	gaatacattg	ttactcctcc	atctccatta	tagtcatcat	ccattgcagc	260760
ggaagattct	gccacctctc	tagagacact	aactgtatcg	tggttaataa	agtcgctccc	260820
attaaaatca	gcaatgcctc	caataggcat	agtataagcc	ttgtctttac	tcatggcgca	260880
tttaattgta	cacaagttac	cccgttcaac	agaatgattt	tgaataatga	acaagttttg	260940
aggattacta	ttgcgggtta	cagcaacata	cgcacacctg	gtagatgcac	cagaaaggtc	261000
aacaattagt	tctctaaaga	aagtgtgccc	ttggcaagaa	tatatcgtca	tggtctgact	261060
agattcaaat	aaaagatatt	gaacgtatac	attgttccca	aatcctccat	tcttgatatt	261120
tggattaccg	ataatttgtc	gtccttcttt	aatttctagg	catttttgtc	ctagccgttc	261180
cacgtacaca	aatactgtca	attcaccatt	cttgtagatt	aaattagtaa	ccactccagt	261240
gtccttagtc	acgaaccttt	cctgagtgcc	atggatcatt	ctattagatg	tagtgaaaat	261300
cacatttttg	ccctgataaa	gagtaataga	tttagcccta	gttaccttct	ttttctcatc	261360
caaaagaatc	gtagttaatg	ccctaggaga	ttcggctgcc	ctcaaaaatt	tcctgtctgt	261420
aaacttgtca	aaaagtgggtg	tactgcgagt	tttaattggc	ttaatttaatt	gttgccggtg	261480
cttgtgagag	atggttttct	cgtggctaatt	gtcagacaga	tccatattca	aaactacaaa	261540
ttttacttcc	actcttaatg	cgggcacaga	attttcaact	gccgcagccg	ctgcaagtga	261600
agtagaagag	gaggatgagg	aattgttatt	gttcttttta	gtttctttga	tgatagaagt	261660
atccactaaa	ttcgagactg	cattctttta	aacgtgtttt	ttagttagtg	tgattgcacc	261720
catcatcttg	tcagttttgg	aagaaattgc	atccttttct	tgtttggtct	tagagtgggc	261780

catgaggcgt	tcacacatat	ccttaggctg	cccttggtct	tttggtataa	actcttcaat	261840
cttcttcctc	ctctcatttc	cctttgaaat	actagtcacc	atttgcatgg	ccaacactat	261900
agattttttca	gagtatttta	gtgagttatt	gtgcctattg	ttaatgttgt	tattttcagt	261960
gtgagcagtt	tgaagcactc	tggaaatctt	taaactaccc	ttaacaccct	ccatcatttg	262020
accattattg	aaaacatctt	cctttctgta	cataagaaat	tcgttaacca	ttgaaggga	262080
gatgttatca	aaatattgca	ctgggtcaaa	gttgtccatg	aaaacactcc	catttctgga	262140
tgatctaccg	gccattcgcg	tatctacca	gtcttgaagg	ttggcagtc	tatcaaaca	262200
tgaaataccg	tacattaacg	aataagcgtg	cttaataatg	tctattctct	ttaacgcga	262260
catgatata	gttctcgaaa	gggcagaaag	ataggaagaa	tatgcaggta	ataacatact	262320
cttccctaca	tctcctcctg	ttgatatggg	catagataat	accctcaacc	aatattcgtc	262380
atggagaggc	ttatctgccc	ctgctcctcc	tcctcctcct	actcctactc	ctgtgcttgt	262440
ggccccattct	gagggcgagt	ggaacaagcg	tccagacagt	gcagatttat	caagagaagg	262500
gagtttttcca	ttatcaaatt	taacctgttg	cattctcact	agtgtatata	aataccacac	262560
acgggctcgt	accaaattctg	aaggcttatt	ttcagtgagc	cattttttcc	acacaacatg	262620
aaagtcaact	aaatgaccta	cacgatctag	agtagatgcg	tcacgggtgca	atttatctgg	262680
tatatcagtt	ctatatatca	tttctccact	ttcttcatca	tcgtcatcac	ctccccacc	262740
actacttttc	ataccagaac	ctccacttcc	tcgctcttcc	aatccattg	cttcttcttc	262800
atcgaaataa	caatagtcct	cgctgcctcc	ataataagct	gctgctgcag	ctgtacgtga	262860
tgatgcacta	ttattattac	cagtttcttt	cttcaagaga	atagatctta	tattttcaga	262920
tttcgctagtt	agttctttgt	atggttaaagt	ttcattctct	aaaaatgaag	caactgtacg	262980
caaattatct	ttaaagtaat	tagcgatagg	agtttcatcc	acaaagtctt	ttccatctct	263040
aaagaaggcg	ttcctcacac	acgctgccac	agcagacgca	cggttatgtg	cagaattgaa	263100
tggtactgca	tctatacact	tgggatcaga	accgtgcaca	tacttgacgt	tcaatatctc	263160
ttcatccatt	aaggaggtca	gatgtgtatc	cttaaatctc	tctgataggc	tagaaacaat	263220
atacaatttt	tctcgccac	tgtaatcaat	ttctctcatg	gctttggcca	tcattgtcga	263280
cacaatactg	catacatttt	cagtgtactt	ttctagattt	gcattgctca	ttttcttgag	263340
ttcagatatg	tgagctagct	ctgaacatat	tccttcttct	attagagcgg	aaagggggag	263400
agatttcatc	atatccaaag	aagacttctt	gtctgatata	gaagtgtgtc	cacttcttat	263460
cttttcgttt	gcacagaaa	tgctcttgca	gcgtaaagag	aatccattca	aagctcccga	263520
tgctctgtcc	ttttcaagtg	catttctttc	catcagtttc	aaaaatgctt	cattgttaaa	263580
gaaatcgta	tcttctctgt	catcaaatct	gtcacaattt	tcttctgccc	tggattgggc	263640
cgggaagaa	cttggtgccg	tcacttccct	tttatagaa	gcattaccac	agtcttcaac	263700
tttaatagca	cttgagacta	aattgttgtt	aactgacttg	acgttattac	tcttcattaa	263760
aattgcttca	tggcgtttat	tgacaatatt	ccgcaggtta	cttgggttgc	caaaaaagtc	263820
tctagagcaa	aacattttca	gtatctttat	aaaaacttca	gtgtatagtt	ttgcattatc	263880
ttcttggcca	aaattatctt	gttcgaactga	cccttggaa	aaggtaactct	tttcttcttc	263940
ttcttctgtc	tcagcttcat	cgctcacttc	ttcttcttct	tcctcctcct	ccccctcttc	264000
ttcttctgtt	tcgtctccct	cttcttcttc	accacctttc	ttttcttctt	ctttcttctt	264060
cttcttgttc	ttgttgttct	tggtgttctt	ctgaggtttt	tcttctctac	tcgggttctt	264120
tattttcttc	tggatatggt	tagtgttatc	ttccactact	gcagaatttt	gcctgttatc	264180
tccaagtagt	ataacaaaca	ctcctccgaa	aggtatatct	ggcctgtgtt	tcgctatacg	264240
taaaacagca	tcaataaaca	ccaattccct	gcaactggcc	attgtatact	catcgataac	264300
aaggaacctt	aaatttgcca	acacttgtat	cactttccat	tttagtttat	cggccacaaa	264360
ttggattttt	tctagagtta	ttcatctttt	cctaaatata	actggaatct	caaatccctt	264420
gttgagggtta	gaaaacacac	tttctgggta	catcaaggaa	gaacctcctg	gtttcttgca	264480
tgcacacatg	agactctcct	ttgcagaatt	agatttgcaa	cacaggagca	tgtctgcaga	264540
tccagaatca	atcaagccgt	ggtcggttaag	aactgcaatt	agttccttga	ccattgtagt	264600
tttcccagct	ccaggaagac	caccagatg	gaacacagat	attcctcctc	cagcataaact	264660
gacagaaatc	gagttgcaca	gatacctcac	tgccagagac	tgttgcaagg	aaacagtgtc	264720
caataacctt	ctggcctcct	tgcacgtatc	tgggagcttg	accgcagaag	cagaggagga	264780
ggaggaagaa	gaagaccag	aaggggatgc	cgctgcagct	gcaactgcac	ttctgagcac	264840
ctgggttctg	gtagccagaa	aggggtatga	tttgatgttg	ataactggaa	ctggatttga	264900
attattgttg	ttgttcttct	tttggttttt	ggtaactggc	tcttggccgc	tggagcacgg	264960
acgtttactc	cccatgatgc	actctcggtg	aatgtcggac	acgggggtaa	aaccaatcct	265020
tttatactag	ttctacctcc	acgaggttgc	cagatggtag	gatactttat	tacaaaaaat	265080
ggatcgctct	cttttgctta	agattttgtg	tgtaacctct	atcgttacga	ttgttacaat	265140
atgtcttatg	gcatttttta	tacatagcaa	ttcctcatct	tcttcaggcg	ccactgccgc	265200
cgctaccgtt	gcagcggcag	gagggatatc	ttcatctgct	ttatttggtta	cctacatagg	265260
gtccttggtg	cagtcagaat	ttttttcaga	agatatcgat	ttaccagaaa	aacaaaagaa	265320
aaaggctgat	aagggaaaag	catcaaaaac	cgataacaat	aacaacaaca	acaagcgtca	265380
acgccgccag	acaaggaagc	agagcccgcg	cgccagaaac	aggactttta	gaagggaagag	265440

gaaattatcc	aaaagaaaaa	tacacgtcaa	gagaaagaag	actctaatta	atcggcgcag	265500
tctcagagga	ggaagaggat	taaagcgagc	atctagaggc	aaaggactgc	ttagagggat	265560
tggaaaaagg	acatttggat	tgtttttcct	cccccttttag	aaaggatgtt	tcttttaatt	265620
atcatgttga	ttatatttagc	cccattaata	tttggtgggg	tgaatttctt	cgtatacata	265680
aagaagaata	actggttctc	tggggccatt	agtaatgaca	ctactattaa	ctccacaaat	265740
tctggaggag	taggaggatt	atgggataat	gtttctgatt	cagagtcagg	gacgtttcca	265800
tctagggtac	aatattccac	atcaacgaaa	aatttagtca	atatagccat	ggatggagat	265860
tatgcgacat	tagtaaggaa	cggaatgtcc	acaaatcaaa	ggccatatga	aacctacaaa	265920
gacgtggagg	atagccagtt	ctattttacat	tttttccacg	ttagaaattt	taaaccttta	265980
aacggtgatg	aaaataaaga	ccaccttgaa	agggatgaaa	gttttgtgtt	gatcgaatca	266040
ccatattata	atggagggtt	tttatcatat	aatatcaaca	acccaaatcc	cattttacaat	266100
tctactgaaa	agccgtatat	taacacggag	ataacttcca	tcgtcagcac	cactggtaca	266160
gatgaaaggt	tcttctgcct	cgagaaggaa	tacgtcgaag	atggtgaaga	aggagttaca	266220
gaaaataggt	acttttttacg	ccacatggca	agtaattatg	ttgtaaaggc	tagtttcaaa	266280
tcagtcatgc	ccactattga	aattagtgat	ctgactggca	catacaataa	taagaatagt	266340
gttaaaatta	agcctgtaac	tgggtacttct	ataatttatg	aaaaattaca	aggaacaaaa	266400
taaaatacat	tttaaagtat	tatgtttatt	gttttatttc	ttctaaaatt	ttatttttagg	266460
tatcctcttg	aatatggaac	gacgggtggg	gggttttttc	ttacccttct	ttggtttttg	266520
gtttgttttc	ttggcccccac	catctggtgt	ttttggtcct	cctttcccct	ttccttttcc	266580
aaaggctttc	ttgaatgcac	cgcccactcc	tggtattgat	cccagcgcag	aagcgatcgt	266640
gccggccagt	gctgtgcccg	ccaggagaga	tgctaagaga	ggagccttga	ttattattac	266700
agcaataaca	atgacaatta	ttgttattaa	aagtaaacca	aaaagtatat	tttttccctcc	266760
tcctaaagac	gccaccaatg	gcgaagccat	cttggtctatc	ttattgttat	tattgttatt	266820
gttattatcc	ccttccatgg	ttgttgcaac	taataatagt	gtgtattata	acattaaaaa	266880
aaacatatata	attttggctc	aaggcacctt	caaggctgtg	aaaatattac	atgcagataa	266940
tggtgattct	gaattcaggg	ttgtgatttt	tggtgcgcag	tttactgacg	tcacaacatag	267000
gcataatggat	agtacaaatt	gtcttgaatt	cctcatcttc	tttgtcctct	gtaccatcct	267060
ggggtttttg	tgggaacaat	gtcctatatg	ttcccttttt	tatatagtaa	ttattcgggg	267120
ttgaatacaa	gtagtattgg	aatggagat	gcgaaccact	aaaagcttgt	atatttatca	267180
aaaaattcaa	gtcaactttc	tcgtcatcca	ctcttctcat	ttttagggtta	atatctctcc	267240
cgtaattgac	gttgcaattt	gttgcatcca	aagcaactgat	gtgcttttca	tgatattcgt	267300
ttaaaacaat	tttataatga	tttttaaagg	gataactata	aagagaccct	tcttctaata	267360
cgatattttac	tgatggctct	gctactacct	ttaaagtcac	gattgtgaac	cctctcaaaa	267420
gagctatcca	ttttttttca	tcogtaaaag	tatcgtcaac	cctccgcttc	cgcttaccct	267480
tcctccactc	cctcctcctc	ctcctcctcc	cccagcttcc	tgccttttat	tatcgcttcc	267540
acctaagat	cttcttccac	cattatttga	aaatacaaaa	aaacctactg	caacaagagc	267600
agctattatc	acaaaatca	ccaggatcaa	aacaggggca	ttcgtattag	acattcttgc	267660
tacatggtat	tggaaaattt	tccacccttt	atacataaaa	aatttggtta	caaattagtta	267720
aaaatatgta	accatgcagt	acaataaaaag	gtgatcaact	ggtttttcat	ttctatatcg	267780
taatgaaaat	tttgcatcac	gcgtattctt	tgtaactata	tcggaatata	cttcatccca	267840
tacagcagat	gaacctcttt	tttcaggctt	aattgcgata	tccttttcag	attccatttc	267900
gtggaagatc	tttacaaagc	aagattttatc	cgtttgatta	ttgaacaaaa	aatcgagccg	267960
ttttttccca	ttatctactt	caaaaattctc	aattgttaga	gaaaaatccc	tcttccagac	268020
tacaatatct	tgggccttag	ccagtggtct	gattagcccg	tgattttatt	ttcctcccat	268080
agaaggagat	aaattgtagc	tggtttcata	cctcccttgg	tcacacacatt	ttactctaaa	268140
aattgccact	gtaaaatcac	tcattgtgaag	attttcaatc	aattgaggaa	ttctcttccc	268200
tatatcaatt	tcaacgctag	ctggcggttt	tagtacgtcc	catgcaaacy	cattgaggct	268260
cttggtcggg	acaaaaaaag	ttaatgccga	tttcggatca	gggaaaacat	ccgcagccac	268320
ctcagttacc	caggcactaa	tggtgtcttc	agacattggg	aaagttgctg	ctgctttttc	268380
atattattagt	gctctaattt	tccctctggt	gccctgcatt	ttattattga	atacagctctc	268440
tccgtagggt	ttaatatgtc	ctccatacaa	atctacccca	gccatggaag	cagttgcagt	268500
atctgacgac	ctcgtgtcca	aaacatttgt	caccctagag	gaaatttccc	catctttaaa	268560
tagttctgca	agtctcgcct	ccattattat	tatttttaat	gtgtacaata	aaaacaatta	268620
atgtgaaaca	aaaggtaata	acaaaataaa	atacataaga	aagattcaaa	aagttttatt	268680
cattattcctt	atcacacaca	tattttttga	cggacaagta	cattaacatt	atcaacattc	268740
aacagaccac	taccatcatt	cattacaaca	acagaaaaatg	gggaagtttt	gttgacacaag	268800
aacttccata	catcattctt	ctttacatga	atcaagaaaag	tattccaatc	atcccatatgc	268860
tcacgcagcc	tgtaccccaa	ccatgggttt	acaaatagac	tattaaattt	atcccatgaa	268920
cagtattcct	ggagagaaat	gaaggggtct	ttcccgctcca	ggtcatttgg	tccaacattt	268980
tccactacct	ttacttcccc	gagtccaatt	agattgactg	tcgtcttttc	ttttgtctcg	269040
atcgcacact	cgccaatggc	agccaacaag	gaatcgggaa	gatcactcct	cattttcttt	269100

ggcgggtgaag	aaggagaagt	gacctgaaga	ggcgtggtc	tcttattatt	atthttgttgc	269160
agttttatttc	cttcggcaat	tgcagtgttc	ttgagtttca	agaaatagtc	gataatgtaa	269220
aactcttcac	cctctcccag	ttcttcatac	atcacatcac	cagatgtcct	gatggcttct	269280
tccaccatag	ccaaagaagg	tgctccacat	tcaatcaaat	ccatcagcag	ttcttccct	269340
cctctcccca	ttgcgacgag	tttgttggcg	tacctgcacc	agggacattt	tctgttctgc	269400
ggcttgtccg	gaccaagagt	agacatcatg	tacttggatt	tgcagcaatc	acattctaca	269460
catacagcaa	ctggaatatc	aattattgccc	tcttcaata	gctttagag	aagacaagtc	269520
ttcccataca	aaatcccccac	agccttcgct	gcagctgaaa	cagcaatttc	attgtcttta	269580
tctgttgggg	gaagattgag	agctccaatg	atatcactag	ccatctcctt	tactttgtca	269640
tcaattttct	tggcattcaa	aagattgagg	gttgtgggtg	atgcagtttt	ggcacgagga	269700
tctctggtca	atthattgtc	ccagtgatag	accattgggt	tgcccatcct	gtagtttccc	269760
ttgcatctca	agcacaattt	ttcatcatta	tcatattcca	tctttagaga	ttttacacca	269820
catcttttgc	atatataatt	caagtccttc	tctgataggt	caagtcgacg	tacagggaac	269880
gtctcatatt	tctccccaat	ctttgagtcg	ccagcctttg	tcaagattct	cagagccaaa	269940
aagtgttcta	gtttattggt	aaagtctctg	tcaactccta	tcttattggc	ccatgtaatt	270000
aagcacctca	aaaatactac	accggaaaaga	ttattctcga	tctctccatc	ggcagttcct	270060
tcaagaatag	agggcaaaat	aatatccaaa	tcagtctcgg	aactgctatt	ctgctcttgg	270120
taatactttg	tgaatgccat	ttttgcaata	gagaggatca	tgthtgaagt	gttggagggt	270180
acttcacagg	agggcagcca	agaggcggt	gcacacacag	atthgattgc	tgcataacct	270240
ccttctggca	gactcagacg	tacatcatac	aaagtccca	atthttgaat	cacagtctcc	270300
aagtcgataa	acatcatttc	tgccacatct	tctcgtcttc	caaataagatc	gctggccaat	270360
tcttctcgaa	gcacttcctt	ctggtcatct	gatccacaaa	agactgggat	ggcaaaatat	270420
ctgthtgagg	ttthtgacgt	ctccaaaagc	acatcttcaa	catttctagt	aatctttaga	270480
catgatacca	atttcttgat	gaaatcaaa	caactgtcaa	actcgaacct	cttgtattcg	270540
tccagtgata	ataatcctcc	tctgtatat	aacttgaga	aactaaatga	ctggtggaag	270600
atthtgccag	cttcttccaa	ggcatcattg	ggcacataga	accacataaa	catggaggat	270660
tgthtcagggt	tgagatctgt	attgttaatc	acttgagtg	catcatagct	agcagatttc	270720
atgtgctttc	cttcttttag	gaaggcatat	tctgccttgt	ttccgcattc	agttcccaga	270780
tcagaaagga	tggtagagac	cctcgagcac	actcctgcat	tattgctgt	aacaaaggca	270840
taaatagccc	caatttcac	aggcacagca	ctgcaagcgt	acatcattga	ttgttccttg	270900
atcatcattt	tgaagagttt	ttcagcaaac	atcttggccc	agtgtacgag	agcatacttg	270960
cgagacaact	tggttttct	tcttgcata	gatgtagctt	caacacttgc	catcaatttt	271020
gtacaacctt	tacaatcaca	gaggtttgta	tggtcaattc	caaaatcgtc	caacgactgg	271080
aaacacgcgt	tcattgtcag	tgccagagta	gaggcggtat	ttcctcccc	tgtaattgac	271140
tgggcccctt	gagtcactac	agccagtttg	ctgataccac	caccaccgct	agaagactgt	271200
tgthtgtgtt	gttgcgtgct	tggtattaa	gttgccttag	agcaacaaaa	ggcactatca	271260
tatgcacaat	tcaagaacac	gctacgcttg	tggtgtttat	atcttctctc	tccctgtaca	271320
actcttccaa	aatctaaagg	tgccatattt	aaaaccctag	acttgaaaga	ttcacggtga	271380
gcgtcgccat	acttttcaaa	tctgcaggc	tctgatcttc	cttcaacttc	aataaaaaa	271440
ttcaattctt	cttggttgat	ttccctcaag	atggggaagg	cactaaattg	atcattcagg	271500
ttcttgaa	gggaaataga	ttgcctcata	ataaagggtg	cgatattctt	gcgcacattg	271560
cacgatcttc	tgtcaaaagga	ttcaaaaagt	tgccatctgt	tgthtgcgta	tccagaaaaa	271620
ttgatcattc	cttcttgga	caattcactc	tggttactgc	cactacatct	agagaaattg	271680
aggatgcgta	gccacaatc	attctccact	agcgccttcc	tcattgtcaag	aatagtcaag	271740
ggtttttgtc	cccaagtctt	catgatgaat	tcttcttctg	gtgcagtttc	cgaatcgta	271800
gagthggcac	ataattttcc	agtgtcacta	ttggcaatac	gcacatcttc	atcggtgaac	271860
acaaaaatga	ggatggggaa	tttttcatcc	ctggtaatgc	catgcatttt	cttgaatgca	271920
ggaatcatgt	tgthaaacac	gtacatcagg	gaagaatgaa	gagcttcaat	gccaccgccc	271980
ccgcctccgc	acacttcggt	cttgcgcata	tgcttcacaa	aatctcccc	ttcccactct	272040
gaacagtcgt	gtgcagcac	aacaggtcca	ctttcaattg	agtgtttgtc	gaaatcattg	272100
tagtaaaacta	tagcattttg	aatgcctgga	gcaatcacat	tgagtgtagc	catgatgcca	272160
gaacaactat	cagccacagc	cgatttcaca	cttccattg	aaccactaat	atccatcaac	272220
gagatactta	gaccagttag	ttttgcagtt	ggagtatctg	tatcagcagc	agcagctttc	272280
ttagtccatc	catcttctaa	aagttcaatc	ttggagggaag	gtgcattttc	catcaaaagag	272340
ttaaaaaaag	atgcagattt	cacagtagaa	ctagaactct	tgctcatggt	ggaagaagcg	272400
cttgaacgga	tacggcccaa	cattgtagta	tatctttatg	gtagaagttg	atgttgacg	272460
taggaaacga	tctcgacaac	tgatgtctga	ggtgcctccg	caggccgctt	ttataccctt	272520
ttcgtgtgac	gtcaattgac	gctcgtacgt	ataaacaggg	tctattttta	gagatgacat	272580
ttttcaaaaa	cgthtatata	atggtgcaat	ttcctattac	tcaaactagt	catatccggc	272640
taagacagga	tgthtttttg	gccaatacgt	ttctggcgca	atctgacatt	ggcccagccc	272700
agcgggtccac	ccttcgaact	tgacatcagg	ccgaccagc	ggtccacccc	ctaaactgga	272760

gtgagctgaa	aaatTTTTtca	aaagtTTTTtg	agatgaagaa	gaggggtgaaa	agtgggtacg	272820
tactatacac	tcagaggggtg	gcagatcggc	cctgtttccag	aaatggctgt	ccagaaatct	272880
gggtcggaca	gattccagaa	acgttttctaa	ccattttctgg	aacagtcatt	tctggaaagg	272940
gttacaatTT	cttataactg	gtgcattatt	tctagcatat	attctagccc	ctttgtgcaa	273000
tctgacattg	ggtcgaccca	gcggtccacc	cttcgaactt	gacatcaggc	cgacccagcg	273060
gtccaccccc	taaactggag	tgagctcaaa	aaatTTTTtga	aaagtTTTTtg	aaacgaggat	273120
gaggggtgaaa	acacctgtta	gaaagtgggt	gctgggtcgg	agcatccgtt	cactgctgtt	273180
ccagaaatgg	ctgtccagaa	atcagattcc	agaaacgtct	ataaccattt	ctggaacagt	273240
cattttctgga	aaggggttaca	atttctttaga	tgtggtacaa	taacttacca	tacatttctg	273300
gtatcttctg	gcaatctgac	attgggcccga	cccagcggtc	cacccttcga	acttgacatc	273360
aggccgaccc	agcgggtccac	cctctaaact	ggagtggagct	caaaaaattt	ttcaaaagtt	273420
tttgaatcga	ggatgaggggt	gaaaacctgg	taacagaagg	catgtctacg	acggcttctg	273480
gttagatcga	gccggtccag	aaatggctgt	ccagaaatct	gggtcggcca	gattccagaa	273540
acgatttctaa	ccattttctgg	aacagtcatt	tctggaaaga	gttacaattt	cttagatttg	273600
gtacaataac	ttaccatata	tttctgggtat	cttcgtgcaa	tctgacattg	gggtcgacca	273660
gcggtccacc	cttcgaactt	gacatcaggc	cgacccagcg	gtccaccccc	taaactggag	273720
tgagctgaaa	aaatTTTTtca	aaagtTTTTtg	aatcgagtaa	gaggggtgaaa	acaccctctt	273780
gaaaggcacg	atctggatgg	tgtcgtccgt	tcaactgctgt	tccagaaatg	gctgtccaga	273840
aatctgggtc	ggccagattc	cagaaacgtt	tctaaccatt	tctggaacag	tcattttctg	273900
aaagagttac	aattttcttag	atttgggtaca	ataacttacc	atacatttct	ggcaccctcg	273960
tgcaatctga	cattgggtcg	accagcgggt	ccacccttcg	aacttgacat	caggccgacc	274020
cagcgggtcca	ccctctaaac	tggagtggagc	tcaaaaaatt	tttcaaaagt	ttttgaatcg	274080
agaaagaggg	tgaaaacctg	gtaggagaag	gtacgcacgc	atactggcgg	cacatgcctc	274140
cagaaatggc	tgttccagaa	atctagggtcg	accagaatcc	agaaacgttt	atagccggtt	274200
ctggaacagc	catttctgga	aagtgttata	ttttctcgca	tcttgtacat	taacttgatt	274260
atggtatagt	acacctctct	gcaatctgac	actgggtcga	cccagaggtc	caccctcgga	274320
acttgacatc	aggccgaccc	agcgggtccac	cctctaaact	cgagcgaccc	taaaaaattt	274380
ttcaaaagtt	tttgagacgg	aggaagaggg	tgaaaacctt	tgcaacagag	ggggtataaa	274440
gggaggtacc	ctcgacacac	ttagacacac	aacctcatca	ccctccgtcc	aatcaacatc	274500
atcaccccat	ctctaaataa	tccatcatgt	atatcttctg	cgaaggttcc	cccctcacag	274560
ggaagagttc	atggatgtcc	aagtgtgatg	atacaggatc	atgtggaatg	tctttcctca	274620
attttctctg	tatgaaact	ctgactact	acaactggcc	tgccgaaatc	gggagacaa	274680
atctccagtt	aggtttcaga	gaaaccagag	tgggtggatg	aatgtttgaa	cctgtcctaa	274740
agacctttgt	cgactcgtgg	aagaaagagc	aaggaaaaga	gagtttgaag	gaatatctgg	274800
actacaacgg	ccaagtcatg	gagatctaca	tcgcagaatg	gttgagacaa	aggccactag	274860
ccttccacgt	gtttacctat	acagatgaag	ctgtcaagag	tggattcctg	aacgaggagg	274920
atctagatat	ggatactgca	accaagtggg	tggctgaaat	tattagagag	aagaggggca	274980
atattcaaga	aataaaaagt	acccttagag	tagtcttcaa	tggcaatgtt	tgtagtgcac	275040
gtttctctaa	cactaagaga	aacttgtata	actttggaac	aaactataac	aatgttgtac	275100
attgtgattt	gttgtgccct	tttgcaaggc	ataggattgt	acatttctta	taaaaaataa	275160
aacaatatat	aaaattcagt	tgtattttta	ttgctcaaat	aagttactac	acccaattct	275220
ccccctctc	tagtgagaga	tcccaatcac	tttctactgt	cactgttgtc	gctgtttgtt	275280
gttctctctc	ttcctcctct	tcttctctct	catcttcttc	ttcttttagt	cgttcttcat	275340
tatatgcttt	aattatcctc	aatacattta	caatggtgcg	ctcttctcgg	ttaaacttct	275400
gattctttcc	ctcaccacca	acatcgaccc	tacgttctac	ctggtatact	gtttcaccat	275460
caccagaaaa	aatttctaata	gacggatttt	ttatagaacg	tacaacaatg	tccactaatg	275520
attctggttc	tgggtgctaac	tgatcatcgc	caataaaaaga	taaaacaact	ccagaaacac	275580
atggataata	ttgcacattg	aattgatcat	ataaagtatt	gaagatgata	gggtaagatg	275640
ttggcccgtg	gcagacatg	atcaaacggg	gcctgaaacc	accctcatct	ctcattgtac	275700
aataaatttga	acacatgaat	ctgattctct	ttcttgtaac	agaatatagg	gggtgtgtct	275760
cattgaatct	gtttgtgagg	aaaaagtctc	gtgcagataa	tgcaaacacg	agacacgtac	275820
ttttgtctcc	tattcttctc	atttctgttc	catattcttc	ccttgcttct	tcatcgatag	275880
catccaatTT	gttggtttcc	tctagttttt	cttctaggta	tttctctctt	gcggcgctca	275940
ggtataacct	gtttggcata	tggatgacct	tattacgttc	atgcttaccg	tccatttttt	276000
cggccgaatg	tgaacaact	gcattcaaaa	ataatgcat	gcattgatca	aaatTTTTtaa	276060
atgtggggta	catattactt	gaaaaaatct	tccctaaccat	actcactgga	acaactaagc	276120
attggtcatg	acaactaccc	actataggat	tttctatcgc	gaggcctttg	taggataatc	276180
gatgtgctat	atcgtgtaaa	ggtaccattg	attcgcccc	taaaataacta	cccatactta	276240
acagtttctt	ttcgactttg	ttgttggtta	tcccacaacc	catcaataaa	tcagcagtta	276300
caattatgta	cttgacagttg	tgaattgctg	cattgaaatg	tctatcagtg	agaattctat	276360
atagagggga	gaaagtgaaa	gacttgtcat	ggggtaaagc	ttctcttttc	actatattgt	276420



tgatatctcct	caaattctctt	ggtagtctttt	tgagccaatc	agattcagat	tcagcacctt	276480
tccttgtata	gaaattcctc	atttgtgaat	gatgttgaag	aaataatgac	gttttttcca	276540
agcagggggt	gcctgctgag	aggcgtattt	tattcacaat	ttcatccacc	tcatgttttg	276600
gagtatTTTT	atgcaaagag	acgatataata	caccttcagc	gagttcgctt	ctccgtatac	276660
ttttgataga	ctcgataatg	gacggtatct	ttctatatgt	tttaacgatt	cccttgatag	276720
caaaccggga	cgccatcttt	catgactcat	tttggagggt	gagatcatgc	aatgaaaaaa	276780
acttataagt	gtgtgtgtta	acgcacgtaa	ataccagcca	ttgacgtcat	atccgcctag	276840
tttttatcct	caacttctga	gaattgctca	acgtactcat	ctcttttcct	ggtacatgac	276900
gtcaatggaa	atgccgattg	acgtcatggt	aggggtataa	aacgactggc	tcgagccctc	276960
ggattccac	tttgtctgtc	ctgagcagta	gagaaggacc	cagtgaagaa	aatactcctc	277020
aacttccaac	aagaattggc	tctgtcaact	tgaacgacc	aactctactc	gtggaggaa	277080
ggcaagtaaa	cgactacggg	tctaccaaca	agaacaacc	agtgctctgt	cacatttgct	277140
atctaggaag	aggaggaaga	attgcatgtg	tcatcgcctc	tgttctgggc	tgcgctcctc	277200
tgtcgtgac	tgtcatgact	ttgttgattg	tggtactggg	aactgcacca	gttaattgtg	277260
atgtgagccc	acagagctac	tcgccgccgc	cgcagccgcc	ggtgcagttt	catccttacc	277320
attctttctc	cacaaccacc	actacttcca	ctactactac	tactacacca	actccaccag	277380
atctataaaa	agtttgacgac	gactatgatg	acgacgtcaa	tattgagggg	caatcagtta	277440
tgtgtgaata	tggaggtggt	ttcatcaatg	gaagaaaaat	ctcaaaaagg	gaagaaaaag	277500
caatgggtat	caatacagat	aatggaggat	ttgtttggaa	gaatggtggt	ttttctcaat	277560
atggcaaaaa	ataaaatatg	gtatatataa	tatgtgttgt	tttattgttt	ctttaaaaaa	277620
taaaaaaaaag	agtaactccg	tctacatagt	tttttttaaa	ttggaagata	taaatagaat	277680
gagtaaaagg	tactgtgcca	ttacatgtg	agatcttgtta	ttagcaacat	tagagaaatg	277740
ggggacaata	aagattatga	aacaagactg	attcaagaaa	ttaatgattt	ggaactcaga	277800
attgaaaata	aaactgaatt	atgtgaaaaa	atcaatgagc	agatgaaaaa	tacacaacta	277860
aaatatgata	aatgtttctg	agaggaggag	acggaaaaat	tccgcaagat	ggaggaaaaga	277920
gttaaatacc	tcaaagagca	gggaatccct	ctagaccag	aagaaaagcg	tacaatgttg	277980
gctgaaattg	acaagagtaa	caaagagtta	gatgcccttc	ttgaggaaaa	tgaacgtata	278040
ataaagctca	ttgatgaaga	gttggaaggt	atgaaataaa	ataaaaagat	aggagacttt	278100
tcagttgggt	ttataaatat	atccctgcaa	ggagatacgg	tctcaaaaaa	tccatgactt	278160
gtcagtagcc	acggaaaaaca	cacttgaaaa	atatacagga	atagatgagc	agacaggaga	278220
gatgcaaaaa	aaatatgata	aattatttga	agatgataaa	aggttccgag	aaatagagga	278280
acgaatcctt	caacaaaaag	agaagggaaa	ccctctagac	ccagaagaaa	gacttgtatt	278340
gtcggctgat	attgatagga	gtatgaaaga	gattgatgat	tgtctcgagg	aaataacca	278400
tatagaatta	tccattgata	cattatttga	tgaattgtga	aacttgcatt	atggtcttca	278460
aaactataaa	taactcttta	tcgggcaagt	gactgtattt	gtacgtatgc	aattaggtcc	278520
atattgggtt	gcaaataaat	aatccacaca	aaacgtgttg	ttttcttata	tcctataaat	278580
tcttggaacg	gaagttatga	ctcacataga	gtgtataaaa	ggaattggat	gttcctatgt	278640
ccgcatcact	tctaactgag	acatcgttgg	aagagggaaca	gagaagagag	gttaacaaca	278700
acaccagtaa	ggaaaatgat	acaatggaaa	aaaagactga	gacggctgca	acaacagaaa	278760
aagaccaccga	accgtctgtc	agtaaaaaggt	ccagaaataa	agaacccaaa	acaacttcta	278820
ctgttttacac	tcttgtaaa	tgttaccttt	cttccataat	caagagtga	agtagtagaa	278880
gtaatgtcac	ttcgaaccaa	gaaagggttg	aggagaggtg	taaatccgta	agcaagatga	278940
tggtcaaaag	ttcactgttt	ttgaggttag	tagtggacga	gtgtctgaga	cgttacaacc	279000
atctagaaga	cgaaatcgat	aaatggccag	atatgacgaa	ggataacttt	tacgtccaat	279060
tgttgaggaa	gggttttagac	aagaagaaat	tgaagaaagg	atctacacat	cctgttgtag	279120
aagatgtttg	gaattccccc	atcgtccaag	aaacattcct	atcccagcaa	ggagaaggaa	279180
ataatccccat	aaagagacat	ctcatggatt	tcaattacct	cacctacgcc	gccaacaca	279240
taaaaacttg	cttcgaaaca	aacctacgca	ccattttccg	gacacgacaa	cagagggcca	279300
tatctggatg	gttagctgaa	aacgggttcg	ataaaaagta	tacgaaactc	gtacaacact	279360
ggataattgg	atgtacctac	aagagtgatt	gggtggacag	tggtgatttg	gaaagggtaa	279420
aagaagggaac	gaaaaatttc	gtgactcttc	ataggaaaca	tttatgtgtt	attagtgata	279480
agaagaatag	tacaatttcc	tattcacctg	aagagaataa	tccgataacc	tcaatactaa	279540
attattacaa	gtttcttaca	acagagtatc	cacaaaacaa	gaaaatacac	aaaattgatg	279600
ttgtcccaaa	acacaaaacta	aagatacact	attgtacgtt	tgaccaaacg	accattcaag	279660
gaatttgtaa	agatttgga	gtgtggaagg	atatggaaga	acgacacaaa	caatcagaag	279720
atatacttta	caagcaagga	tggtacctat	tattcgacgt	taaaaagatt	aagaaattgc	279780
gtccaaactg	gaactttcac	tctatccaga	cggacggcga	aggcgtctct		

gaaaggcaaa	cgaaacgtac	aagaagaaca	ataaagagta	caaagaggcg	ttagaggaaa	280140
taactaggtg	cgataatggc	gaagaaatta	taaatgatgg	taacggtgat	acttctacac	280200
ccactaaaa	attcgaagct	tacttgaagg	tagtgaacga	gcactacagg	ttactgtgga	280260
acgaaaagg	aaagaaaaag	tacaggaaaa	atgccatgaa	agtatactct	agaaaacaaa	280320
agtgcatact	taactttata	gatgaattaa	tcctctaaaag	ggataaaatt	gaagattacc	280380
acattgcttt	tgggggatgcg	aaatttgcct	gcacgggaag	agggtgagcaa	tacgcatcac	280440
ctgccaggat	tttcgccaag	aagataaagg	aaagagtcgg	agggtgataag	agggtttactt	280500
tcgtggacga	gaaatatacg	tcaaaagtat	gccatcgctg	caatcaacct	ttaaatatgc	280560
tggagaagga	ttgtttttca	ccgaataaga	aaagaaaacc	gccgacaata	gtaacaacca	280620
caacaacaac	aacaacagaa	gaagacgaag	aaaatggaaa	atggaagaag	gctacacctc	280680
tcagagaaaa	tagagatacc	agaagatgct	cgtccgaaaa	gacgcaattc	ggttacagtt	280740
caaaccgaaa	agtatcgaca	ggagatatct	ctatggaaac	gccagtacct	tcttccactt	280800
cctcttcctt	ttgtactcct	acttccatta	catgtgtcct	gggaggaaaa	ttcgtcgaca	280860
ggctcttcaa	tgcaagcacc	aatattgttc	ataaatttct	agggttttgg	gataaaaagt	280920
taatggaaaa	gaaagacaag	atgccgttga	agtatcactt	tattcgagtt	gcctgagaat	280980
aggatgtaaa	aaactcgtgt	cactagtga	atagtggcgt	agccctgaag	gatgagaagt	281040
atgctatttt	cgaccttacg	gtcattgtgg	tatatcaact	cttgcccgat	aaaggggttat	281100
tcaacaacat	aaaaatggta	caatattcta	gggtgtgttt	actattcctt	gcttgaaatc	281160
ccaaaagggt	gaccttcaa	gttcacttga	tacactaact	tcaacaaatg	gggatatttc	281220
tgccctcacc	ttttgcacaa	cagactctat	gaattttatta	cacatcaaat	tcaatttgta	281280
ggctgttata	ggtccaatct	tcatatcggt	gtagaatctc	gaaccctcga	cacgtgattt	281340
ttcacgggca	aggaaagcaa	tatcagtcag	tatagggaat	tcaaaagtga	ctttgttgaa	281400
tatctgcaaa	tcactgaacg	tgccgtctgt	aatgggtcatt	tcgttgtgcc	tgagaagtga	281460
tctcggacgg	aggcggttag	tcatgttttc	cagttgaggc	aaaagatata	ccatttcttt	281520
ataaatttag	cgagaggcta	tttcttctct	cgcttccggt	gcggcttttt	cttcctcgat	281580
ttttatgtct	cgaccatgg	cttcggcaag	tcttctctct	tccattctgg	cgacttcgat	281640
tgatgaggcg	aggatctgca	catcaccatc	aacattttca	tcaatataga	cttcatcttc	281700
atcgactctg	gggagcttac	tcggcggttg	tgtttctact	gattcttctt	cttcttctgt	281760
tccttcagtg	aggctctccg	cctttctctt	actggctcgt	ggagaaactt	cttttgcttt	281820
tgctgctgct	gcagcttttg	cttccataga	cctgggtggaa	accattttga	ggttcttggg	281880
tgatgttgta	tgtaacttc	ttagtgttca	aagaggactga	acaagtgtgt	gctcagggtg	281940
gatcctgcag	tccttatata	caatttcaag	atgggggaagt	gggggggagaa	aataagggtg	282000
ccaactagta	cctttgtcac	ctacaccaga	aatccacaca	tgagaagggt	ttgatgtctg	282060
tttttgata	cattttctgg	gtccagttgt	gtgggggggg	ggtggtataa	atatagccca	282120
caggaggaga	gcctgtgtca	ttctgtgtgt	atgtcttgta	ctgaacatta	ctgaaatggg	282180
gaatagtga	tctcgttcta	gtgggtattga	aattgtacat	aaaaatgggt	cacccaaaaag	282240
gtctcataaa	actctttact	tgtcaaatga	aactgaaaga	catgcccgaa	tacaaaagca	282300
gatcgaaag	ttacatcaca	aaacaaataa	gcaatttgaa	caggctcaaa	aggctcctga	282360
caaaaacgaa	gagcgaaaga	agcatcagca	acagcaacaa	ataataattc	ctctagacct	282420
agaagaaaga	cgtgcaatat	tggttgaaat	cgataaacac	atgaaagaga	ttgatgggtt	282480
catcgaggaa	agtgaacgct	taggtttact	tgtagatgca	gaaatcaata	acttggaaga	282540
aaaggagggt	gaagaggaac	atcttttgaa	acaaaaagaa	gactaaacaa	taaaacatct	282600
aaaaatacat	tatatgattt	tttggtattaa	taaaaaacaag	tggaataatt	tttaggtata	282660
ttttatgtgt	tttttaccaa	caaggatcat	caatgaaact	atctattgta	acttcaatag	282720
aaggggttat	atcttctctc	actttctgta	ctacagcctg	tacaaaatta	tcacacttgt	282780
ggagcaactg	gttaactgta	agagatccaa	tctccatgtc	gccaaactct	tttggtgggg	282840
gtgtattacc	ccacctagaa	acggcttcac	ggttgatcag	gaaccctaata	tcagatagta	282900
ctccaaaact	aaaattgaca	gtattttgta	cctcaaattc	atgctcatag	tgtgaaactg	282960
ccatctcatg	ttcccttagg	gggtttttca	gtttgtatgt	tttggtagta	ttgtccagtt	283020
gcacccaaaag	attttccatt	ttctctgcag	tgctcgtcgt	cactctgtct	tcatttctct	283080
cctcatcctc	ctcttctctc	tattctctct	cttcaccatc	gtcttctctt	tctttacatg	283140
ggaggggag	gtgatgtgtt	tctttgtgtt	cttctctctt	ctcttctctt	attctggggc	283200
gcttggtact	tgacgagtc	tctaccagtt	cttcttgttc	catttttact	tcacatttca	283260
cctttacttc	ttctggctcc	ctcttctctt	tggtggggag	aagagtagag	gtggctgcta	283320
ctgcagatga	agatgttgtt	gatgttctag	aagagaccat	tttggggggtt	atttttggaa	283380
ctcgtgggtg	gaacaagtag	tagtagtatt	agactcttca	ttgtttgact	tctttgttac	283440
tagtttgcga	aatacgggca	atgttttatt	atttatagat	aatgtcacat	atggcaacta	283500
cgagataaat	gttagatttg	atgaaaatcc	tggtatctata	aaaaagaaat	caaaacactt	283560
aaacgaattc	gatttaaaaa	tttgcgaggt	taatatagca	aataatagta	gattaccaca	283620
aaaatttgtt	aatgctacaa	atagattaat	atacataaaa	cctccatctt	tacacgatgt	283680
ttgtaaaagta	catggttata	taaaccacg	gaaattatta	ttagatgcaa	aagggaccca	283740

ggaaatcggt	tatatgttcc	gtcattttt	tggactactt	gtatatcacg	gatgggatgt	283800
cgatggttta	atgaatactt	tcgggtttact	agaatttgtg	acacaaaatt	tcattaacca	283860
gtagaaatg	tacttagata	aagaccacag	tgaatatattg	tatcatgcag	aatatcttat	283920
gaatacttta	aggaatctca	gagaaattga	aaaagagcca	attagggatt	taggttggat	283980
taagtacagg	gctaattata	gaggtttcag	ttaataaagg	actgttttgt	ttttttttat	284040
tttttgtccc	aaacccattt	aaaataaatg	catggttagc	aaacttttat	gtcttttaca	284100
gccttgttca	aaaggactac	atattcattc	ccttcatttt	cttctctttt	ccttttctct	284160
cctttactgc	tgggtgctgc	gtttccatct	ccatcttctg	aagtttctcc	tccacttctt	284220
ccatctccac	gttcttcatt	atacatggaa	attgcccttg	acgtattgaa	aatcatgcgt	284280
cgttctcgcc	gcaaacgctt	ccgttcgtct	tcgggcaagt	tttcttccct	tttgagtaac	284340
tctttgtatt	ccttagatgt	cggatcaatc	acattgattt	cggcaccatt	ttgatatact	284400
tttccattat	ccatgaaaat	tttgatgtct	gttctctgta	cctctctgac	catttccatt	284460
agttcccttt	ctcctggagg	gactgcaaag	gttatactat	tgccactggg	gcgggagaaa	284520
agtctcgctc	tgaagtgggt	tcgtacactg	tccttaatac	atataggggc	atccgatcca	284580
ggtatggaca	tgatcaaacg	gggcctacgt	tctccacat	ctctcttttt	atattcaggt	284640
gaagagacat	acctgattcc	ttcttctgtt	gcagaataaa	aggaaccatt	tccgttgggt	284700
ctgcatagca	aggagaaatc	tcggtcagaa	aaagcaaaca	ctaagcaggc	tccaccatca	284760
tagcgggatg	tcgcaatcga	tgattttttg	tgacatcccc	tcaaagaaat	cctttgttct	284820
tcagagacgg	cacaacggtt	cctcaattcc	ttcagttctt	cttccctcat	atttacttca	284880
ttctctgcaa	actttatttc	tcttctgaaa	ttatccatct	gtaaattatc	cctttcattt	284940
gcgtatatga	cggttgcatt	gaaaagagat	gacatataat	ttccaatact	tttagctgat	285000
gggtgtgtac	tggtgtagaa	aatcaaacct	agtttatcca	ttggaacaat	taggcacatg	285060
ttggagtaac	tgcctgtgat	tgggtttgca	atgtaggccc	ctttgtatgt	taacctatca	285120
catatatcat	acactgatat	gcgggaagaa	aagccacatt	gttccaccaa	taattgttcc	285180
atgttacgaa	gtgttctagg	gcaatggctc	ggcgtgtagc	cacaccctac	taaaaagtc	285240
gtggttatta	tcatatagtc	acattttttc	acagctgcac	tagaaagtct	ttcgtgtaaa	285300
agcctgtaga	gaggagaaaa	tttaaagttt	ttgtcactaa	gaagggcctt	ttctttaacg	285360
attttgttga	tattttgcat	atcaatgggg	agtgatctgt	tccacttttc	cccataatcc	285420
tcacacccat	catcttgcaa	taaactccct	aacctgggga	gattgtgagt	atactttaat	285480
ccgacttgaa	gagtattgtc	gcctgtcaat	tgtctcagtc	tatgcactcc	gttttttatg	285540
tgaagtactt	ccttatcttt	tagacggact	atatatagtc	cgctccctta	ttcacttttt	285600
gtaaccctat	caacagattt	gaatgataat	aaaactgttt	cgtatttgtc	agggttttca	285660
ccagaaatag	tgaatccatt	ttttaccttt	aaagtcttga	attcttccat	tttgatatac	285720
ttaaatgtgt	catactcggt	tgtcacagat	aataaaccta	cagaccttgc	cattgaactg	285780
tgacacagag	tgggcccata	cgcaaattgc	cacgttgctt	gaattactta	atctgtagat	285840
gaaatcggca	aaaaattacg	tctttagaat	gtctcggaat	gtcatatttc	tttgtgcgta	285900
gtacacaaaa	tgtggcactt	ttcaagccac	cacctctaca	tcccagtgag	gcgggtggag	285960
tggacgtcat	atttaactgg	aatatgtgta	ataatatagt	ccaattctta	aaaaatcaat	286020
agaccaataa	aacaacaaaa	aacattttgt	aattttattt	ttcaactaaa	atctcatcaa	286080
ataatcttct	cagcaataaa	cttacatttc	atatcacagt	gtacaatact	attcgtgcat	286140
ttaccaacac	ggtacacgta	attcttactc	gtcgagaaac	atgaactaca	aatattccct	286200
ttgtacacat	ttctggggat	aacttcaatc	tttacaacaa	acgtctctct	ctccttgaga	286260
acgtcaataa	accagttatg	tgcattcattc	aattcttgaa	taatttggtc	cattttcttg	286320
acatcttctt	ccctgtaaac	catcacatgg	aaaactggct	tgtatttgac	ccactcggcg	286380
acacatgctt	tgaattcttc	tccatacatc	tccaaatact	ccctcaatcc	aatttttgat	286440
tctggaaact	gttctgtgtc	gtgcctccac	atgcctgtga	aaaagttcaa	tgatgatcca	286500
aacattccat	ccacgagcct	gggacgttcc	tggtaatcgg	atgcacgcaa	atgctcttga	286560
atggtccatg	ggaagatggg	taaatagtcc	ctataattgg	tgtacatgaa	gttgaggaaa	286620
gactgtttgc	cctttccggc	agttctcatg	ttatccaccc	atgaagtttt	cccagttagg	286680
ggagatctct	cgacgaatac	aatcatgttg	aagggttaaga	cttgtctaac	tctctcgagc	286740
gagctctctc	tcttttatag	aggcaaaaa	gtagttgcca	gccaccacct	taaaattcgt	286800
gcattaataa	tatataattt	ttatattttg	tatcattcaa	ccgtagtcca	tctaagagtc	286860
aacatgtcct	cctcctcgtc	gtcgtegttc	tcgttccgca	tctccacct	ccagaccttt	286920
ctcaaggctc	tggctcacc	agatctggtg	gacaagatta	cccagaaatg	tgacgagaca	286980
ggaagaaacc	agaagtgc	catccagttt	ctggccgaca	tctcgcacct	gatccaagga	287040
gaaagaaatg	gaggaaatct	gttccctttg	caccggttca	agaaccaacc	acatctgga	287100
ccaagaatag	tgggaagtct	tcacgggaga	acattggaca	atgacattga	agaatcatac	287160
tgttattttg	tcaaggatct	gtataatgga	gtattttcct	atgtgaacgg	cgtcaaggag	287220
ttacagggcg	ttctggacaa	gaaaatatct	ggatctggat	ctggagaatc	ctcctcttct	287280
agagctcccc	tgatcccaat	aactgatgtg	gatttgctgt	acattttcgg	tactttggta	287340
gttcttcccc	ccagatctaa	agcgtaccga	gtcatcactg	aagctgttct	agcactcccc	287400

ttcaatgaat	tcagtaacaa	ctggcctcct	acaaatatca	aaggagcata	cgtgtctaga	287460
gatttcagga	tgtttaatct	gttggccggt	ttagatcata	tagaaggaga	agttggggga	287520
gaaagtgaat	gggaatccat	acacgcacat	gtcgtcaagc	gaatggtcac	cattatgcgc	287580
aacaaagctg	agaagaaacc	tccatcaaca	tctagaatct	ttagagtgtg	tgtggctgaa	287640
ccagttaatg	atgcagtgac	aaagatccct	atacgtgtac	tcagtaaat	attcgggtca	287700
agactcgccg	gtattctcca	gaaagtgtac	tcttattcaa	tgctaaatct	tccatatctc	287760
ctgtcttcaa	attctataga	catcaagcaa	ggagtaaaag	gaattacatt	atctatacca	287820
tctgcaagaa	aattgggatt	ctatttactc	caaaaggata	caacattaca	atcttcccta	287880
tcacaagatg	ttgccgactg	catagtttca	atcaacgctg	gtattattgg	tgatgatttc	287940
tctgaaaaaa	tacgacagtg	cattgaggag	aaaaacaagc	cagaaaactg	ttgtatgtgc	288000
ttttgtgaaa	ttgacaagac	gcccgatctt	tcttatagtg	aacatgtggc	aaggcacaat	288060
ttcttccccg	tccacgcatt	ctcctcatca	catgatgaca	agtgttgtgg	agcaaaagatt	288120
tgttccgaat	gtatattccc	gtacatcatt	tccctgtatg	agaaaatgac	tggtgtggga	288180
gggtgaaaaa	ttgtagattt	gttccagtg	cctgggttga	aaagtggcat	gctcaatcta	288240
aagggaagat	gttacgagtt	ttcaaatctg	tgtaagagaa	tgatactacc	atacacatcg	288300
actcattggt	cttctctctt	tgatgctacc	ataaatcgcg	cagaggcttg	tttttactcc	288360
ctagagtgtt	tccagtatga	ttttgaaact	gcgaggagaa	ttgcgcatgg	agctaaagac	288420
attccccatg	tttacaataa	ggtagtaaa	aatgtaaaag	atttggtatg	actgtgtgcc	288480
ttgtactggt	acaaatgcgt	atctcctgtc	gtatgtgatg	agccgaatga	aagtacggac	288540
tatgaaatgg	tggatgtaac	tccccctcta	attaatctta	ccgagattgt	tgattcggaa	288600
gagtatgatg	atgggtcccg	aaatcatatg	tgccagcaaa	aatttacctg	taactttatt	288660
gcgggttcca	gtggagaaac	acccaccatt	agtacgtgca	gagatgctgt	aacttttcta	288720
ggaagagcac	cgaggaagaa	aatggcagga	tgggatgatc	aatcggcagt	ggggcaagcc	288780
attatagcgc	tagccaactg	gagaaagagt	ggggaattgc	ccaaaaatat	gtttgattta	288840
ctagaagggg	taaagtccgt	actttataga	ggcgacagtt	tcttgttacg	tgcgataaac	288900
taccctgtg	ttattggtag	atccatgagc	cctagctcgg	aactcgttaa	aagaaagggtg	288960
aataaaattg	ctttaataaa	ggccttcttc	cacgagaaaa	gggtgcgtcc	agacgcattc	289020
aaaaagttac	ttgaatgggc	agaactatta	gtcaaaagtt	atctcatgga	agttttactt	289080
cagacgccag	aatgtgtcat	acaccgcgcc	cattcatttg	taggcaaac	tctcctcatt	289140
actgacgaat	tggttcacat	gcgtccagat	gatgccacaa	gaaacgccta	tatccagaac	289200
ctaaatgcgg	ccagacagaa	tgccgctgct	gcagcctcat	tttctgggtc	gctcccaaaa	289260
cctgaatttg	tcccctgcaa	agaaaggacg	cctgaatgga	tgatgaaaa	ggacaatgat	289320
gatgttagag	ttgtaaatg	tccttcatgt	aaaaaggcta	tccagaaata	tggagggtgt	289380
gtgaatgtgt	tttgtgaatg	tggaacaaac	atgtgctgga	tatgtgaaga	gaagggttct	289440
cctgctgatt	ctaatacattg	tgtggagaaa	cacaggattg	tttatagtaa	ctgtgttagg	289500
gttaaatatg	ccttagaaaag	tatgtacggg	tttgagattt	gtaccatgaa	aaatgtagaa	289560
gaaggagtta	aaaattatta	tgtaatggag	aatggatttt	tctttgatgt	acaagaaatg	289620
gttgctaaga	aataataaaa	cacttgtgaa	atgttataac	ttgttttatt	gtccattata	289680
ttcaacaaac	tttaatttct	ttgcatgcct	tgttcaaaag	ggcaacataa	tcgccttctt	289740
tctcctccct	ctttctcttt	gttctctcac	tgcttgtggc	tacttcttct	tcttccccac	289800
gttctctggt	gtacgtctca	attgccttaa	ctgtgttgaa	aatcatgcga	cgctctcggc	289860
gcagacgctt	cctttctctc	tctggtaatg	tttcttctct	ttttattatg	tccttgccct	289920
ctttagaaga	ggggtcaatc	acttttattt	ctacaccatc	ttgatatact	tttccattat	289980
ccatgaagat	tttgatgtct	gatccagtaa	cctctctgac	catctccatc	aacaaccttt	290040
cattcggagg	atcgatgaat	gatatttcat	taccctttcc	ggatgcaatg	aaatggttat	290100
taaaatgggt	tcgtatacta	tctctgatgc	atataggtgc	atctgagcca	gttatggaca	290160
tgaccaatct	gggcctacgt	tcattccacgt	ccctctttct	gtagtctgcc	gaagagacgt	290220
atctgattcc	ttcttctgtg	gcagagtaaa	aggaaccatt	tccattgggt	ctgcacaaca	290280
aggagaaatc	tcgggtcagaa	aaggcaaaag	ccagacaggc	accgccgtca	tatctggatg	290340
atgcaattga	ggacttttta	tgacatcttc	gaagagaaat	ccttgttctt	ctgaggcgag	290400
catatagctt	tttggtattct	tttaagttttt	cttccagaac	acttctttcg	ctaactagaa	290460
ggttgacttc	attttttgca	aatctgattt	ccttttctga	attatctaata	ttttgattac	290520
tcttttctag	cgtgtatata	actgcagcat	tgaaaaggca	tgacatgtaa	tttccaatgc	290580
ttttagctga	cgggtgtgtg	ctgttgtaga	aaagtaatcc	aagtttatcc	attgggtacaa	290640
ttaggcacat	atttgaaaaa	ctgccaacta	tggggtttgc	gatacttaag	ccattgtacg	290700
ttaacctatc	acagatatca	tacactgata	cacgagaaga	ggtaccaccg	tggtgcatac	290760
acacttggtc	catattctta	agagtacggg	tacaatttct	aggagaaaaa	ccacacccta	290820
ctaagaagtc	tggtgtgatt	atcatataat	cacatttctt	aacggccgca	tttgaaagac	290880
gttcatgtat	gattctgtat	aggggtgaaa	atttaaagtt	cttgtcatta	actagagcct	290940
tttcttccac	aattttgttc	atttctctga	atgggcttgg	tagtgattcg	ttccattttt	291000
ttccataatt	agggtcttca	tcttctaaga	aactaccttg	ttttgggaga	ctggatgtgt	291060

atttttagtcc	aatctgaagc	gtaggatctc	ctgttaattg	tctcaatctt	tcggtaccgt	291120
tcttgatgtg	gagtacttcc	ttgtctctaa	gacgaactat	aaaatgtcct	tccttttagct	291180
cacttctcct	gacactcttg	actgatttga	atgttaatat	tacccgttca	taattttcgg	291240
tattttcccc	agacaaacaa	ataccatttt	ttacttttaa	ttgtttaaag	tcttccattt	291300
ttataccgtg	taaccctaac	aatggtgtgc	cagtataata	aatctacgga	ccatgtctct	291360
gatctgggaa	gtgtactcgt	gattttctgta	gaaatttgcta	tttccctattc	attattttcca	291420
ttacaggaaa	agatgataaa	atgaagacgt	gcgatgagat	atgtgttttt	tcaatatcgt	291480
atatcaaatt	tgggcaaatt	acatatTTTT	tagcgtcaac	actcatcttc	atgcaagact	291540
ttttggagtg	aaattactaa	aaaaggctat	atttcatgta	caacataaaa	cacatgtgca	291600
gacattaaat	tggtttgctc	acccccccaa	catcgttttc	atcaactctt	tcctcacctc	291660
tatataaaac	cagcctgcac	cccctcggaa	cccacagtcg	acttgtaccc	tcggtcgaga	291720
tgacatctcc	agctccatca	ccctcttcca	ccccaaaatc	cagttgtacc	actattgtaa	291780
accgatgtgg	tttctctcct	gacaacaaca	aggaagtggg	catctacgac	accaattcca	291840
aattcaagtg	tgaacccaaa	aatctggaac	taattgggtg	actttctgga	gtctctgata	291900
atgttggtac	ccagatatcc	cccgaccaga	tatttggtgg	aacatatatg	gtcaaatata	291960
actggtctaa	atctgggtcat	gaacgcttca	gtgacatgag	taacaactgt	ctggacaata	292020
ttacacgccc	ttcagaagtg	attgaaagtg	tgataaagaa	aacgtccagc	gactttaaaa	292080
tgaagtacac	acgttccttg	atggaccaca	ccgagaaata	ctatttttct	ggtgaccaa	292140
aattgagcaa	aatttagtagt	tggtgtacaa	cccctatacg	acagtgggta	tgcaactccg	292200
tctagaaaaac	tttgtcaagg	aagaacatga	aactgtcgtg	gtgcacaacc	cttctggaat	292260
gactggattc	aacatattta	atagttcccc	cgtgtatttt	gaagtgcaca	atgagatgga	292320
cgccctaatt	tttatggcgg	ctttcttgaa	gcacaatagt	ttatggggag	aaattaacgc	292380
caatatggac	ttgtacacgt	ttgattatgc	gggtgctttt	ctggacgaaa	gatggtgcca	292440
ccacgagaag	agtttttctg	tcgtccgagc	acaacttatc	aactcgtatt	acaagtgcag	292500
gagaaaaatc	atgcaagccc	tggaacaata	ctacaacaac	aagaataaga	agaggaagaa	292560
tgttgggtga	gcacctgcgt	tcacatttat	gtacggggac	ggagagggag	gaaagggaagc	292620
cctagaagct	agtttctgat	tgattggggg	aacaagagga	ggaaagattg	gtgttgattc	292680
aacaccatgc	ccccattctt	cagccatgca	actaaaactg	gacaatgaag	gaaactatgg	292740
atgtattgcc	tgcttcgcat	caatgttctt	tgtattggag	aacccaggtg	atgaatcttc	292800
cttcatatca	acggatgcct	ctaaaattgg	acaagcgcaa	gcatggatag	atgaacgact	292860
acgaaacaat	gaaaattggag	gagaagaaaa	taatgtcttt	aaaaagacct	tccatatgct	292920
ggctgatatt	acccaaaagg	ctcatgaaac	tgcttatttc	aataccatcc	cacttggacc	292980
caatggcagg	cagtgggaatt	ggcctactca	cactgtggaa	cctattgccc	atgaatttgt	293040
tacccattct	ctagtaaaca	cattgaaaaa	tctaggggat	agaaaacttc	cccgattcaa	293100
ttttgatatc	ttgtacaact	tgcttaatcc	atttgaaaaa	atgttgctag	tgtttattca	293160
aaattgtcac	attttaactg	gacataaaaa	caatgaaaat	gtggtgcctc	gaggttctgc	293220
ttctgggaag	tggtggacta	ttaattttgt	gggtgtgaac	atgtggactt	ttcaagtaac	293280
aaaaatgtaaa	gttgaaaagg	atagaaaaat	atccgatttg	gcctgtatgg	aaactctccc	293340
tcgtctacct	aatccaggaa	gcactaccgt	cgatgacaga	atagttttta	agggattctg	293400
tagaggggaa	aatctagggg	gtgtaggtga	agtcgtatcc	gacattacac	agagtgtcaa	293460
gaatttttgt	ctcatggttg	aaaataggaa	atttagtgtg	gataaagaaa	ctggtttcat	293520
ctcttcagaa	tcgatagtgt	ctgatccctt	cttttcacta	gaagtgactg	gctgtagatc	293580
taatcgtgcc	caagatacta	ttaataatgg	ccgagttagt	gctcgtgtaa	tgaggatcct	293640
aaagtacagt	gaagtgctc	gtgtatggtt	ggccaaggat	gaaaatgcca	tcacttttga	293700
aaacgttaac	cacgatacgg	ccatctctac	ggacgctatg	gagcagagcta	tagggcagca	293760
caagatactg	tactatgata	ttgaaacaac	agataaagat	ttcaccgaca	aaaaatcagt	293820
catcacatct	attgggttct	gtttgtgtac	gggaggcgat	atgacacatg	gaggagagag	293880
aggagtattt	ggactgggtg	cacctggatc	cgacgtggaa	aaggtgaaag	agactataat	293940
aaattcgtac	gatcctgaag	aaaaggaaga	cattatgaaa	cagtgccttc	aagtgattga	294000
aattttcacc	aacgagtttg	aaatgttgct	tggttttggg	aagtatatag	ataaagttaa	294060
gcctcacgtg	attagtggtg	ggaacaatgt	agcttttgac	gacccctttg	tctttactcg	294120
tatcgtcaaa	catttgagtg	atcacaccaa	agacatgtct	tattgtgtag	cagatgcata	294180
tacagcagaa	tctgtccttc	ctagagcaac	agaaggagga	ggaggaggag	aaactccata	294240
tagattgagc	acccctcaag	aaagaataca	actagcaagc	actggtattt	tcaataaatt	294300
gggaaaattt	gtagacaaga	aaactggcat	gttgaaacct	gaaatgactg	cagattttatt	294360
ggccggggca	gaaagtccag	ccaataccaa	gttttaaggaa	cgcaacaagt	tatcctccag	294420
taataaaggga	tcagcaggat	ggttccagaa	aattattggc	ggtatgtgca	gtgctattcg	294480
gttggtatctc	atgaaagtgt	gcgaaaaggc	ctataaagaa	tcctctctctg	aattttaattt	294540
gaacgccgtg	ctcgccaaag	tgagttagtgt	cggcgacaag	gttaaaaaatg	taaaagatga	294600
agtagaccta	cactttcatc	tattgggatt	cttgaagctg	aagaaggccc	aggatcaggc	294660
aaaagtacac	gtctattggt	gcaaggatgc	ctacttgact	ggtatagttt	ctacctccat	294720

caacaaggaa	ggggagattt	ttaggctgtg	tatggactct	gctttaaccg	aggcggtcgt	294780
gacagccaac	ctggccactc	ctctatgtat	aggagaagga	gcaatctgta	gaaatattggg	294840
agaagaaagg	gcagatagaa	gagggtgtgg	agtaagaaga	cactctattg	ccacagacac	294900
aaagggaggt	atggtgagtc	aacctatcgt	caatcatggt	ccctatcaaa	cgattgacat	294960
gacaagtttg	tacccgatga	ccatgtgtca	gaataatctg	tgcaccacta	cctttgtgac	295020
ccatcgacaa	attatgcaac	tgagggatag	attggtactt	gaaaaaatga	aaaacaaaaac	295080
caccgactct	ttattgttgt	tggacgttat	tgacgagtgc	aatcagattg	tggtgtccga	295140
gtacagaccc	attgatattg	cagtcgcata	atggaagaat	agcaactcta	atagacaaac	295200
tccaattact	cgcatagagg	aaagtttggg	tctaagattc	atagaaaatt	tggtatgccga	295260
gaagacaaat	aataaaacgt	ggtgcaccaa	tacatctccc	aatatgaatg	tcactgccgc	295320
aggtatggat	tacttccccg	agatttgtgt	tgacattaat	atgcagtttg	cggccaaagg	295380
gaatgatgat	atgcatatag	ccccagcaag	tttagagtat	atgcttcaag	tattgccccat	295440
aatgttaatc	gacagaccgt	acattggcgc	acacataaca	gctggaaaat	gtcgtacatt	295500
ggaggatatt	ctctcagaac	tcgaaaagga	cTTTTctggt	gaaaaagatg	aggaaattat	295560
aagaacccat	tggacattta	aggggtcaaaa	acaatacgat	ttctgtcata	gtcctgtgac	295620
ccaaatggct	cgtcacatta	ttgaatctac	gggaagaaat	atccgtgatt	atgaaggcaa	295680
tgaaaaattc	gagaggttgg	ttagcttata	agacagaatt	tatcgccgcg	ttggcgcat	295740
tgattcggcc	aatgatccag	ctgttagact	gtggtcttct	cgctctaata	atggttgaat	295800
gttggtttag	acatggaacg	taaaaactga	cattcttaag	ggaatcatcc	ctcaaattgca	295860
agccacttac	agagccgatc	gagttgtgat	gcagaacaag	gccaaaggag	ttgccaaagt	295920
gggagacatg	aaaagagctg	gtctaaacaa	agttggacaa	aatattatga	agctcgggat	295980
gaattccatg	tatggtcatt	tggccctaag	agcacgttcg	agccgtaaag	agtttgctgc	296040
tggtatctgcc	aatactgcct	caagtatttc	caacatgtca	gccaccggag	gaattggagg	296100
aggcacaagg	cactcggatga	cggccaatca	gattacagaa	aatgctcgat	gtgtatttgg	296160
caatatttgg	tgtggattac	agatggctct	tcctgttact	aagcagacgt	acggggatag	296220
agattctgta	ttctgcgtgc	ataatattgt	aggtgatgga	ggaatgatac	cagaatatga	296280
tgaacaaact	ggcaaatatt	attatgtgat	ggatattgct	ctaaaaaata	aaatggctgc	296340
aattattccc	atcctagtca	actcgttaac	aaagggcatc	cagttttag	agcgccgaga	296400
cgctgggtgtg	ggcatgatga	atatcgccca	tgaacgtcta	gctgtcgctg	gtcttttgtt	296460
tgccaagaaa	acataccata	tgcttcactt	taatgaaaat	agtgcagcgt	tcaatgacat	296520
gataaaattg	aaatcaaccg	ataacaataa	taagtttgca	tccttttatca	agagacctag	296580
ccagccagat	gggtatgttg	ttcccataaa	attcttagag	attcttagag	cgggcgaaag	296640
acccgctggt	aagaaaattga	aaagcttttt	ggaagaggaa	ggaattcatg	acgagaagag	296700
tatggaggaa	tggtttacct	cttcacctac	gtggatggcc	atggatgctt	ctgttatcaa	296760
caacttgtat	gcctcacaaa	ttgtaggggt	ggagaagggt	aactggattg	acgccatgac	296820
ttcccgcctc	atagaagcgg	gtacagaaat	gatggaggcg	gtgacgcaag	cgaatgcagc	296880
tttcacccct	tacaaaaagg	gagcctttgt	gaagaaggga	attacaccca	ccaccaaact	296940
aaagggctct	caatcattga	ttgcaagatt	tttaccataa	atagaggaaa	agaaaagctg	297000
ttatttggat	gtgatgaaga	atcatgtgga	gaattttgca	tcccatataa	caaatacctgc	297060
tatgatgatt	actagttccc	gagtcaacaa	gtttgatacg	tcaaaagaac	agagtagacc	297120
taatcctcta	gctctagcga	taaataacca	cctgaaccct	tcttcagaaa	tttcattggg	297180
gcagaaattt	aagacggtga	catcagtttc	ttcttgaggt	ctttcggcag	aggaagggga	297240
agtccttgct	ggtattttta	acgctggtag	cgtgcgttgg	gatgccacca	acatgaaggg	297300
aagtgttcct	gcatttttcag	tcaagaattt	atctgttgtg	cccaacgcca	tcacatctgt	297360
atacaagatg	gttgagagcg	ataagacggc	aataaaatcc	atgattgcta	aaaatgtaga	297420
agtgttgtgt	tctacatctg	ccaatactgg	atcttctctg	agaagaggag	cattgtcatt	297480
taatacaggc	gtcattgtta	caaaggacgt	ggctatggct	tgtatacgat	ctctaaataa	297540
taaacaaatg	ttattgtttg	ttggaggggg	aaaggattac	ggtgaagacg	acgacgacga	297600
cgacagaaga	gcagaagaag	aggacgaaga	aaatggtgaa	aacgaagaga	acaaaaggta	297660
ctgtgtcacg	gaaaaaaaaga	tccctggacg	aagcactaac	aaggatgttg	gtgaagaaac	297720
taaaacaagc	gagaaaacgg	agggagaaaag	aaagggctct	aagacggcaa	agggaaaagac	297780
ggaggaaatt	gctagttcgt	tgagtaaatg	tggaagaaa	gatgcgagag	atgtcattct	297840
tgaccgttta	ctaaaagcaa	cacattcttc	ttgcaccaac	aatgaagaga	gaaccagagt	297900
cttacaacaa	tatagcaatt	gtacattatc	ttcctatata	acttcagtca	tgaaattgga	297960
ccaaagagta	gcagaccaa	tggaaaaatt	aatatctcaa	ttggatcaaa	tacgtaatct	298020
ctccaacaag	aagaggcaag	aaaagggagg	gccttttaag	tctgaattgg	acgccatagg	298080
tgctgcagtt	aaggttaagt	ttttcccggt	tttagatgct	tctagaaaat	tgactcaaga	298140
ccattggaaa	aagtgtcccg	tgtccatccc	agaaacgcgt	gaagaaaaac	cattaatggg	298200
tgtgcctttt	gaagttgcac	tcaattctct	aataggaaaa	cacaagtgca	cagatacatg	298260
cgacatggct	tggtgtcaat	cattgtattt	tgtcctcttg	tacacgctag	ctttaaaatt	298320
tgagaacgaa	agattggccc	ggcaaatggg	cctagatgac	tctgtagatt	tgatggctga	298380

gatgttggtc	ggaggggata	aactattggc	ccaggaagtg	ttaaaaaggg	taaaagatgc	298440
tcaagataga	aagttggtga	aatcttttatt	gccttttaaat	tataaccatg	acacaaatag	298500
aatttatattt	ttgtttgagt	ctttaaggtt	tgctcagaaa	cctgtagctg	gtatgagtgt	298560
tagtgaaata	aaagacgctg	ttagaggtct	ggccttttct	accactacag	gtactgtgtg	298620
gaattatact	gatgaaagat	tttttgacc	attgtataac	atggatgaac	tttgtaacga	298680
acgtgtcaat	ggaaattgta	aattgtcctt	tataactggt	atztatcata	cggcagcagt	298740
agaattggct	gctgcatgtc	tatcttggtg	tttghtaagaa	atgataataa	aaaacatgta	298800
taatttcatt	ctggttttta	ttttatatcc	tcaagagtgt	tagtagtagc	agcagcagca	298860
gcagcaatag	cagcattatt	ttcagcgaca	gcttcttcat	ttctattgat	tgatatctgg	298920
tcattttcta	cagcccatgg	tcgtttaagg	aatattcttt	gaagcagaaa	cacataccca	298980
gcaatgattg	caatgatcaa	tattaatagt	agcgaattaa	ttaaaaataag	cattttgtcc	299040
acattctggc	taaaaataaaa	aagtttatct	ctcaatgaaa	aattttttatt	gaccaatcac	299100
ttcgggaagt	tttgagcat	gacacactat	tactccaaaa	ctatgctcac	tcgtatctag	299160
ttccacaaca	tcacgcgtca	tatttaaaac	atgcaccttt	aaagcctggt	ttttcttata	299220
caattctgta	ttgattatag	ggtttacaac	cttttaggct	tccttttagag	atactatttt	299280
catgtatttt	acaatcgaat	atgagttgtc	ttgtgcacca	gacgggagcc	tgatcatgaa	299340
ctctacttct	ctccacgctg	tattgagcga	gagatcatta	agcacaactt	ctgaagaaac	299400
gagaggttgt	aaaatagagt	tatatttagg	tttaattagg	aaacatttgt	ggaaacttga	299460
actgttaata	tcaatagaaa	ctgagctata	tgctgacgac	atggcttgca	ttttcaaatc	299520
atgttcaaat	cttactacat	aaccaagaaa	attataatct	gcttcttcac	catcatcttc	299580
ttccatggca	tcctctcttc	ttggctcttt	tagtacaatt	tcctttgggt	ggtagtcat	299640
gttgatatatg	ttcattgagc	tatgatttcc	cacaacatca	tcaaagaaaa	ccccttctgg	299700
gataatgcat	gcaccgacag	aggtgtagaa	taatcctcca	tatctaata	caccgactgc	299760
ggtagcgttc	tcttcatcat	agtaaccgag	cttgattttc	acatgactca	tgggtccgat	299820
agagatatgt	gaagccggtt	cagtagcgga	aaaaatagac	acttggttga	acattttgtc	299880
gtcaggaaga	gtctcgaata	aaataccgac	aggggaatta	tcttcaacac	tattaaagtt	299940
tggtgcataa	gatagccgcc	ctgaactact	tgtattataa	attggttatat	cggatgctat	300000
ttcagaacaa	agatctccta	taaaattgtg	attagggcag	accaacatcc	cgtctccagt	300060
gtaagacgat	acatgaagtc	ctggtccagt	tggcacgaaa	atggcagccg	ttcgtgaagg	300120
atctctcacg	tcaactcgtc	tcaccttcac	tggtactttt	ccaaatcgct	gtggatctac	300180
attgaaacta	aaatctcttt	cgtggggatc	acttccatcc	tttaaagaga	agagaggcac	300240
ttctgtaaca	ggagaccaat	ctgaatagta	ccttctattt	gttctatttt	tttcttctag	300300
agtgggtacc	gctctgcggt	gcattcggta	cacctccaaa	tccgtttcct	ttacttgaat	300360
cgattttgct	ccttcatatt	cccagagcgc	atcagaatcg	tacctgtcgt	cgaacgaatc	300420
ttcacctccc	attttattta	ttttctcta	tatgataaaa	accacaccta	aaatgtctaa	300480
tattttacta	cactgaaaaa	atggcgta	ttgaccaagg	ggcgtttgga	gccaaatctg	300540
tgatgcagca	acaatacctt	cttccaccct	ctaataaggct	ctccaaacaa	caacctccac	300600
tgccatcatc	ttctcttcaa	ccttctctct	ctaataaacc	taggagtaca	tcaagagtaa	300660
cagacatatt	tggtgtgata	acttggtgtg	ttttaattgc	tgcttttata	agcaactcat	300720
ttagtgttac	aaaaaatgtg	gtaaaacttt	ctaaagaaca	aaccgagaaa	atactagaaa	300780
aagatttgcc	tgataaggtg	tacaaattgt	ttgaaaattt	aaaggatgga	acatttggtg	300840
taggggaaga	tgaggaggaa	gaaagggagg	agagggagga	aggggaggaa	gagcttgaaa	300900
caaaaaacat	aagacttaaa	agaaaagtga	aagaaatgac	tgaacaaggg	gatcaaggaa	300960
taaaagtaag	gaaattacat	ggcccgagag	gagaaaagag	agaaaactgt	ccagcaggag	301020
cagttggccc	tgaggccctt	caaggagaaa	gaggagcaat	tggaccggca	ggaaaggatg	301080
gagcagttgg	ccctgcaggc	cctcaaggag	aaagaggagc	aattggaccg	gcaggaaaagg	301140
atggagcagt	tggccctcaa	ggccctccag	gagaaagagg	agaaaatgga	cgccaggaga	301200
gagatggagc	agttggccct	caaggagaaa	gaggagcaat	tggaccggca	ggaaaggatg	301260
gagcagttgg	ccctcaaggg	gaaagaggag	caattggacc	ggcaggaaa	gatggagcag	301320
ttggccctgc	agggccctcaa	ggagaaagag	gagaaaattg	acgcccagga	agagattggg	301380
cagttggccc	tgaggccctt	ccaggagaaa	gaggagcaat	tggaccggca	ggaaagagatg	301440
gagcagttgg	ccctgcaggc	cctccaggag	aaagaggagc	aacagggtata	ccagggaagg	301500
atggcgtgga	cggttctgtg	ggccctcaag	gagaaagagg	agaaaattgga	cgccaggaga	301560
gagatggagc	agttggccct	gcaggccctc	aaggaagaa	aggagcaaca	ggacgcgcag	301620
gaaaggatgg	tgagttggtt	cctgcaggcc	ctcaaggaga	aaaaggagaa	gctggtaagg	301680
acggttctat	agggccctcaa	ggaatacaag	gcccagagg	agagactgga	ccaccgggaa	301740
gggacggcac	tgacgcagaa	agaggagaaa	gaggcttccc	aggaccacca	ggcgaactgt	301800
gaccaccagg	aaaggatggt	gtggatggtt	ctgagggccc	tcaagggaaa	agaggagaaa	301860
caggaccctg	tggacctagg	ggtgaaccag	gtctagctgg	cctcccagga	agagatggag	301920
caattggccc	tgaggccctt	ccaggagaaa	gaggagcaac	tggctctacca	ggaaggaatg	301980
gtgtggatgg	ttctatcggc	ccccaaggaa	gaagaggagc	aacaggccgc	gcaggaaaagg	302040

atggggcagt	tggccctgca	ggccctccag	gagaaagagg	agcaacaggt	ataccaggaa	302100
gggatggtgt	ggacggttct	gtgggcccctc	caggagaaaag	aggagaaaact	ggaccagcag	302160
gaagggacgg	ttcagttggc	cctgctggcc	ctcatggaga	aagaggagaa	aatggacgcc	302220
caggaagaga	tggggcaact	ggccctatag	gtcctgctgg	tcctcaagga	gaaaaaggag	302280
aaaatggacg	cccaggaaaga	gatggagcaa	ctggccctat	aggccctaga	ggagaaaactg	302340
gtgcaatggg	aaagaatggc	gtggacggtt	ctatgggtcc	tcaaggaaga	agaggagcaa	302400
caggccgcgc	aggaaaggat	ggggcagttg	gccctgctgg	ccctccagga	gaaagaggag	302460
aaactggacc	agcaggaaag	gacggttcag	ttggccctgc	tggccctcaa	ggagaaaacag	302520
gattaactgg	cagcccagga	agagatggag	caactggccc	tataggtcct	gctggccctc	302580
aaggagaaaa	aggagaaaat	ggacgcccag	gaagagatgg	agcaactggc	cctataggtc	302640
ctgctggccc	tcaaggagaa	aaaggagaaa	atggacgccc	aggaagagat	ggagcaactg	302700
gccctatagg	tcctgctggc	cctcaaggag	aaacaggatt	aactggacgc	ccaggaagag	302760
atggagcaac	tggccctata	ggtcctagag	gagaaactgg	tgcaatggga	aagaatggtg	302820
tggacggttc	taggggtcct	caaggagaaa	gaggagcaac	aggccgcgca	ggaaaaggatg	302880
gagcagttgg	ccctgctggc	cctccaggag	aaagaggaga	aaatggacgc	ccaggaagag	302940
atggagcaac	tggccctata	ggtcctgctg	gccctcaagg	agaaacagga	ttagctgggc	303000
tgccaggaag	agatggagca	attggtcctc	aaggagaaaa	gggagaaaat	ggacgcccag	303060
gaaaggatgg	ggcaactggc	cctatgggtc	ctccaggaga	aaggggagag	actggtccta	303120
taggtcctgc	tggccctcaa	ggagcaactg	gtcttccagg	aagggatggt	gtggatggtt	303180
ctgttggccc	tgaggaaaaa	agaggattaa	tagggcgcac	aggaagggat	ggggcaattg	303240
gccctgtagg	tcctgcaggc	cctaaaggag	aaacaggatt	agctggcctg	ccagggatag	303300
atggaaagga	cggttccgtg	ggtcctcaag	gagcaattgg	acctataggc	ccacgaggag	303360
aaagaggaga	aactggacga	ccaggaaggg	acggtgagga	tggttccaca	ggccctatgg	303420
gcccccaagg	actaagagga	gctacgggag	ctccaggacc	gcaaggagaa	agaggattaa	303480
agggacggcc	aggaaaaagat	ggtgaaacag	gtcctccagg	gcgacaagga	agggatggaa	303540
taatgggtcc	taggggtcct	cgaggagaaa	aaggagcacc	tggtaatgat	ggtctagagg	303600
gacctgaagg	aagagatggt	gcacctggtc	ccgctggccc	tattggacct	caaggaaataa	303660
gaggattaaa	aggtatccag	ggacgaccag	gaagagacgg	agaaatggga	ccagccggca	303720
aggacggaat	agaaggccct	agaggccaag	atggaacaac	tggcgctaaa	ggacctagag	303780
gattaagagg	ttttcaagga	agaacaggag	aaactggtgc	acaaggatct	agaggagaaa	303840
aatggcgatag	agggctaaca	ggccctcaag	gaagagacgg	tccaccgggt	gaagaaggtc	303900
ctcaaggctc	taggagagaa	aggggcgcac	ctggccctag	aggtcctaga	ggatttcgtg	303960
gccgttcagg	acctcaagga	agtaacggcg	tgcaaggacc	tcgaggtccc	cgaggaacaa	304020
aaggaagaac	aggaatacaa	ggcctcactg	gcatagaagg	tcctcgaggt	cctagaggta	304080
tacaaggaaa	ggaaggaaaga	atggggaaaa	ttggacatcg	aggagaaaag	ggtgataaag	304140
gagaccgtgg	agaacaaggc	atcgctggag	cagacgggga	aaaagggtcca	agagggtttac	304200
gaggaattcg	aggccctatt	ggtgctcctg	gtaagcctgg	cacggaaggg	gttagaggtc	304260
ctagaggggt	gagagggtgt	cctggctatc	ctggcgcaac	aggggaatta	ggtccccaag	304320
gaccaacagg	tcctcaaggg	ccagcaggtc	ctcaagggcc	gatggggcgt	acaggagata	304380
ctggtcccat	gggcccctcct	ggagcagtg	gaccaagagg	agagaaaagga	ggtagaggaa	304440
gaaagggaaa	aaatggccct	aaaggagcgg	acggaaaaga	tgccgtaaat	atcatacaaa	304500
aatattcaat	cacccatgct	cgtgcagaga	taatgtggga	aggaaatgaa	atcggagaaag	304560
catacattgg	aagatcttat	ggaactgata	caatccctgt	gatgatagaa	aatagaatag	304620
ggatgacaaa	tgaggacaaa	aaaaacgaat	attgtataca	agtaatgaca	atgcactcaa	304680
taacaactag	aggaagaaca	tcgggtgttt	ttgtggtaag	caataagaca	gattatatcc	304740
ttttagttac	tttactgatg	ccagaaagtg	tttctgttag	aacagatgtc	agtacaaatg	304800
cgaggtcaga	gaggggtgaat	gctgttagag	aaagagaaaag	caaatcgtac	agattttatta	304860
ggccgtctga	ccaatctata	ggtactcatt	cacgttcaaa	aattgccgtg	gtaatgtatc	304920
cacagcgaag	catgagttac	tcagttgata	cattagacgc	tgatgtggcg	cgaagagaaa	304980
caacgtctgt	gctttttatta	gcagaaacca	tacacgggga	aaaagataga	ggtttctatg	305040
ctgatagagg	aactgtaggg	aggttgatgg	tacctccac	tgaagaagag	ttatttggtat	305100
tgcaagc						305107

&lt;210&gt; 2

&lt;211&gt; 855

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 2

atggctgctg	caaaaatgga	cgctatcctt	gcggatatta	atgggaatga	tacagattta	60
tccaagctaa	tcacagacgt	gattcaaaaag	agagccaagg	ctgtcatgga	tagaaatagg	120



```

gctaaaatgg acatgaatag aagagtagat gaggtctattc aggaagccgt agcggccaag 180
aaacaaaaag cattagtgggt atttgataaa ctcgtggaag aaactgacag cggacaaaag 240
gtccctccaa cattatcggg atccgattac gacgcgtggg tagacagagc catgccttcg 300
catattgaac ttgtagagag tgttgaggga gattctttgt atgataaaact ccctcctttt 360
aacgtacaag acatagacga ccaaactcggg gatgagatag atacaccaat atcttacctt 420
gccatggtag tggtaaaagt cgactgtgaa actgggggata tcgaagaaga gtacaatctt 480
gtcctacct ttggtgtgac acaaaataat aaaatataca gagatgaaag agaccagatt 540
tttaciaaagg ctgataaatc tgtgctgtatt tttaaacttg ctaaattgga tagtatatca 600
ggtaaaagta gacaactgac gtatgcggta aaaaataaca atgaatatac agagtttgtc 660
tgtagcgtct ttgcagagtt tgaatctgac agtgacacta ctaaatacagg tataggtatt 720
cgtgaatatg acaaacctaa aaatgaattc gaatatgagg agcgagagat ctttacattt 780
tttattccaa tacaaccgc agggacgaaa ttattgttat actttttggt ggacgtcagg 840
tcccgattata tatatg                                     855

```

<210> 3  
 <211> 284  
 <212> PRT  
 <213> SHRIMP

<400> 3

Met	Ala	Ala	Ala	Lys	Met	Asp	Ala	Ile	Leu	Ala	Asp	Ile	Asn	Gly	Asn		
1				5					10				15				
Asp	Thr	Asp	Leu	Ser	Lys	Leu	Ile	Thr	Asp	Val	Ile	Gln	Lys	Arg	Ala		
			20					25					30				
Lys	Ala	Val	Met	Asp	Arg	Asn	Arg	Ala	Lys	Met	Asp	Met	Asn	Arg	Arg		
			35				40					45					
Val	Asp	Glu	Ala	Ile	Gln	Glu	Ala	Val	Ala	Ala	Lys	Lys	Gln	Lys	Ala		
			50				55					60					
Leu	Val	Val	Phe	Asp	Lys	Leu	Val	Glu	Glu	Thr	Asp	Ser	Gly	Gln	Ser		
65					70					75					80		
Val	Pro	Pro	Thr	Leu	Ser	Gly	Ser	Asp	Tyr	Asp	Ala	Trp	Val	Asp	Arg		
				85					90					95			
Ala	Met	Pro	Ser	His	Ile	Glu	Leu	Val	Glu	Ser	Val	Glu	Gly	Asp	Ser		
			100					105						110			
Leu	Tyr	Asp	Lys	Leu	Pro	Pro	Phe	Asn	Val	Gln	Asp	Ile	Asp	Asp	Gln		
			115				120					125					
Ile	Gly	Asp	Glu	Ile	Asp	Thr	Pro	Ile	Ser	Tyr	Leu	Ala	Met	Val	Val		
			130				135					140					
Val	Lys	Val	Asp	Cys	Glu	Thr	Gly	Asp	Ile	Glu	Glu	Glu	Tyr	Asn	Leu		
145					150					155				160			
Ala	Pro	Thr	Phe	Gly	Val	Thr	Gln	Asn	Asn	Lys	Ile	Tyr	Arg	Asp	Glu		
				165					170					175			
Arg	Asp	Gln	Ile	Phe	Thr	Lys	Ala	Asp	Lys	Ser	Val	Arg	Ile	Phe	Lys		
			180					185					190				
Leu	Ala	Lys	Leu	Asp	Ser	Ile	Ser	Gly	Lys	Ser	Arg	Gln	Leu	Thr	Tyr		
			195				200					205					
Ala	Val	Lys	Asn	Asn	Asn	Glu	Tyr	Thr	Glu	Phe	Val	Cys	Ser	Val	Phe		
			210			215					220						
Ala	Glu	Phe	Glu	Ser	Asp	Ser	Asp	Thr	Thr	Lys	Ser	Gly	Ile	Gly	Ile		
225					230					235				240			
Arg	Glu	Tyr	Asp	Lys	Pro	Lys	Asn	Glu	Phe	Glu	Tyr	Glu	Glu	Arg	Glu		
				245					250					255			
Ile	Phe	Thr	Phe	Phe	Ile	Pro	Ile	Gln	Pro	Ala	Gly	Thr	Lys	Leu	Leu		
			260					265					270				
Leu	Tyr	Phe	Leu	Val	Asp	Val	Arg	Ser	Arg	Ile	Ile						
			275				280										

<210> 4  
 <211> 1461  
 <212> DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 4

```

atgttcgtca taagcatagc tacgtcattg gtgttattct tcttccttct tttcgtctca 60
ataacaattt tagatggtgc aaaaacaatc gactctcaac cttttaaggaa aaggaggaag 120
aggaagagat atcgtaccag tgagagtggg gacggcatag acggaggaac tggacaaca 180
aacggaggag gaggaggtgg aggagaagga ggtgggtggg gaacaaatgg aaatggaact 240
ggaacaacaa acggaggagg aggtggagga gaaggaggtg gtggtggaac aaatggaaat 300
ggttctggaa caacaaacgg agggaggaggt ggaggagaag gaggtggtgg tggacaacaa 360
ggaggaggaa atggaaatgg agggaggaaat ggaaatggaa atggaaatgg aggggataca 420
gacacagacg attttgagcc tacgccagcc cttctaaaag aacgtctact taattccata 480
tcttcaaaac ctaaagaata ctatgaagca ttcgtatctg cagaggtaga aactgcctta 540
caattatctc gagatgattc taccctaaatc ataataattg atgacgacca attagaattg 600
gacgcctcag acactctaca aggaaaacca agggattatt tgttcaagct cgcaggtggt 660
tcatcggcct ttttagaagg taccactatc cgcaaagcgg aagaccgtgc ccgtaataata 720
aatgaggaag aaattgcaca aacaatatta agtcaactaa gagaaaaaca catcaacgat 780
gaatacgatg gaaaatatgc cacacccgag gaaagagctg atttttccaa tagtcttaat 840
cttgttacta aatacacaaa ccatgaagtg ggtcttttag taggagaaac tattgaaaag 900
gctttccctc atgagattga gtttgagaga tgcataattc tagtagagga ttttaatatg 960
ggaaactatta cttcaaacac tatgcagtac aggtccaacg cttacaaaat cagagtagta 1020
gaaggatcaa caacagatcc aggggaagtt gtccctgatg attgtttggt ttttgccgta 1080
gtagtaaata aggaacaaca ttctctagaa atatctgcaa ctaacagatg ccaagacata 1140
tgctttgtaa ttattcctcg tttatccgca ataggaaaaa atgctaccat ggtaataagg 1200
aaaggtgatg aaattaaaca agaaacctat ctgtttgtgg ccaataagaa tgacactact 1260
catttttcaa tcatcacaga caaggatgaa tctgttggaa tagaattaaa catgctcatt 1320
ttctcagaaa gaattctccc cactttgagt gaccctgcaa ccgttccaag acctttgact 1380
gacgccaacg tactgtcagc ctacggaaag cgcctaggtg ttggtgcctt tacagacaaa 1440
aattttattg ccagccaata a

```

&lt;210&gt; 5

&lt;211&gt; 482

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 5

```

Met Phe Val Ile Ser Ile Ala Thr Ser Leu Val Leu Phe Phe Phe Leu
1 5 10 15
Leu Phe Val Ser Ile Thr Ile Leu Asp Gly Ala Lys Thr Ile Asp Ser
20 25 30
Gln Pro Phe Arg Lys Arg Arg Lys Arg Lys Arg Tyr Arg Thr Ser Glu
35 40 45
Ser Gly Asp Gly Ile Asp Gly Gly Thr Gly Thr Thr Asn Gly Gly Gly
50 55 60
Gly Gly Gly Gly Glu Gly Gly Gly Gly Gly Thr Asn Gly Asn Gly Thr
65 70 75 80
Gly Thr Thr Asn Gly Gly Gly Gly Gly Gly Glu Gly Gly Gly Gly Gly
85 90 95
Thr Asn Gly Asn Gly Ser Gly Thr Thr Asn Gly Gly Gly Gly Gly Gly
100 105 110
Glu Gly Gly Gly Gly Gly Thr Asn Gly Gly Gly Asn Gly Asn Gly Gly
115 120 125
Gly Asn Gly Asn Gly Asn Gly Asn Gly Gly Asp Thr Asp Thr Asp Asp
130 135 140
Phe Glu Pro Thr Pro Ala Leu Leu Lys Glu Arg Leu Leu Asn Ser Ile
145 150 155 160
Ser Ser Lys Pro Lys Glu Tyr Tyr Glu Ala Phe Val Ser Ala Glu Val
165 170 175
Glu Thr Ala Leu Gln Leu Ser Arg Asp Asp Ser Thr Gln Thr Ile Ile
180 185 190
Ile Asp Asp Asp Gln Leu Glu Leu Asp Ala Ser Asp Thr Leu Gln Gly
195 200 205

```

Lys Pro Arg Asp Tyr Leu Phe Lys Leu Ala Gly Val Ser Ser Ala Phe  
 210 215 220  
 Leu Glu Gly Thr Thr Ile Arg Lys Ala Glu Asp Arg Ala Arg Asn Ile  
 225 230 235 240  
 Asn Glu Glu Glu Ile Ala Gln Thr Ile Leu Ser Gln Leu Arg Glu Lys  
 245 250 255  
 His Ile Asn Asp Glu Tyr Asp Gly Lys Tyr Ala Thr Pro Glu Glu Arg  
 260 265 270  
 Ala Asp Phe Ser Asn Ser Leu Asn Leu Val Thr Lys Tyr Thr Asn His  
 275 280 285  
 Glu Val Gly Leu Leu Val Gly Glu Thr Ile Glu Lys Ala Phe Phe Ile  
 290 295 300  
 Glu Phe Glu Arg Cys Ile Ile Leu Val Glu Asp Phe Asn Ser Gly Thr  
 305 310 315 320  
 Ile Thr Ser Asn Thr Met Gln Tyr Arg Ser Asn Ala Tyr Lys Ile Arg  
 325 330 335  
 Val Val Glu Gly Ser Thr Thr Asp Pro Gly Glu Val Val Pro Asp Asp  
 340 345 350  
 Cys Leu Val Phe Ala Val Val Val Asn Lys Glu Gln His Ser Leu Glu  
 355 360 365  
 Ile Ser Ala Thr Asn Arg Cys Gln Asp Ile Cys Phe Val Ile Ile Pro  
 370 375 380  
 Arg Leu Ser Ala Ile Gly Lys Asn Ala Thr Met Val Ile Arg Lys Gly  
 385 390 395 400  
 Asp Glu Ile Lys Gln Glu Thr Tyr Leu Phe Val Ala Asn Lys Asn Asp  
 405 410 415  
 Thr Thr His Phe Ser Ile Ile Thr Asp Lys Asp Glu Ser Val Gly Ile  
 420 425 430  
 Glu Leu Asn Met Leu Ile Phe Ser Ile Leu Pro Thr Leu Ser Asp Pro  
 435 440 445  
 Ala Thr Val Pro Arg Pro Leu Thr Asp Ala Asn Val Leu Ser Ala Tyr  
 450 455 460  
 Gly Lys Arg Leu Gly Val Gly Ala Phe Thr Asp Lys Asn Leu Leu Ser  
 465 470 475 480  
 Ser Gln

<210> 6  
 <211> 903  
 <212> DNA  
 <213> SHRIMP

<400> 6  
 atgggagata agcaaaaggt ggaacagctt ttaaggggaat taaaggcaga ggctaattgat 60  
 gattggctat cggctaattt tgatccaatt gttgagagat ttgtcacaac taaatctgat 120  
 gagacagccc aagttgttaa acaggccggt gatgaaaaat acgatgaatt attagaagat 180  
 aagggtgaag aatgagacc ggatataatc aatgaagcat ccgaaacata tgataaaactt 240  
 cgtgctgata tgataagaga ggtagacact agtagtggtt ttgctcctgc aatagctggc 300  
 acagtggcaa gaactatcaa taatttaaga gataaaagga aagaatatga aaagaggcta 360  
 tggacattag cctacaaacc atggagaaga tatgtacaag caattacagt gatggaattt 420  
 cgtttatcat ataaagacct gactgtccat gccaatccg atacatat t aacattccct 480  
 tttttaagaa taaaaaagat cgcctatatt aataacgacc gcgcagccc cgtgaactgc 540  
 tccttgctcag tgtcttatcc caacaagtcc gagtggggaa atgataacgg agttggacgt 600  
 aagggtgaca tacacatcag aagaaatgat ttacaggaaa aggatcttta cctgtctggt 660  
 attgtatgt tagatactga ttttccagga tatgataaag ctgtggaagt tgatgcccct 720  
 aaatttcatt ttgaagcagg gaacaggact atgtttttac ccaaaacctc taatctattt 780  
 aatcgatcgc atatagtaaa ctctaaaata tgcactatag tgttccctcc cgcttctgcc 840  
 agttctgctt ctacaacaga actggataat gtctattaca ggatcacatg cacatgctcc 900  
 tag 903

WO 01/38351

PCT/US00/28888

88

<210> 7  
 <211> 298  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 7

Met	Gly	Asp	Lys	Gln	Lys	Val	Glu	Gln	Leu	Leu	Arg	Glu	Leu	Lys	Ala
1				5					10					15	
Glu	Ala	Asn	Asp	Asp	Trp	Leu	Ser	Ala	Asn	Val	Asp	Pro	Ile	Val	Glu
		20						25					30		
Arg	Phe	Val	Thr	Thr	Lys	Ser	Asp	Glu	Thr	Ala	Gln	Val	Val	Lys	Gln
	35						40					45			
Ala	Val	Asp	Glu	Lys	Tyr	Asp	Glu	Leu	Leu	Glu	Asp	Lys	Val	Glu	Glu
	50					55				60					
Met	Arg	Pro	Asp	Ile	Ile	Asn	Glu	Ala	Ser	Glu	Thr	Tyr	Asp	Lys	Leu
65				70					75					80	
Ala	Ala	Asp	Met	Ile	Arg	Glu	Val	Asp	Thr	Ser	Ser	Val	Ile	Ala	Pro
			85					90						95	
Ala	Ile	Ala	Gly	Thr	Val	Ala	Arg	Thr	Ile	Asn	Asn	Leu	Arg	Asp	Lys
			100					105					110		
Arg	Lys	Glu	Tyr	Glu	Lys	Arg	Leu	Trp	Thr	Leu	Ala	Tyr	Lys	Pro	Trp
	115					120						125			
Arg	Arg	Tyr	Val	Gln	Ala	Ile	Thr	Val	Met	Glu	Phe	Arg	Leu	Ser	Tyr
	130					135					140				
Lys	Asp	Leu	Thr	Val	His	Ala	Asn	Ser	Asp	Thr	Tyr	Leu	Thr	Phe	Pro
145					150					155					160
Phe	Leu	Arg	Ile	Lys	Lys	Ile	Ala	Tyr	Ile	Asn	Asn	Asp	Arg	Asp	Val
				165					170					175	
Asn	Cys	Ser	Leu	Ser	Val	Ser	Tyr	Pro	Asn	Lys	Ser	Glu	Trp	Gly	Asn
			180					185					190		
Asp	Asn	Gly	Val	Gly	Arg	Lys	Val	Asp	Ile	His	Ile	Arg	Arg	Asn	Asp
		195					200					205			
Leu	Gln	Glu	Lys	Asp	Leu	Tyr	Leu	Ser	Val	Ile	Cys	Met	Leu	Asp	Thr
	210					215					220				
Asp	Phe	Ser	Gly	Tyr	Asp	Lys	Ala	Val	Glu	Val	Asp	Ala	His	Lys	Phe
225					230					235					240
His	Phe	Glu	Ala	Gly	Asn	Arg	Thr	Met	Phe	Leu	Pro	Lys	Thr	Ser	Asn
				245					250					255	
Leu	Phe	Asn	Arg	Ser	His	Ile	Val	Asn	Ser	Lys	Ile	Cys	Thr	Ile	Val
			260					265					270		
Phe	Pro	Pro	Ala	Ser	Ala	Ser	Ser	Ala	Ser	Thr	Thr	Glu	Leu	Asp	Asn
		275					280						285		
Val	Tyr	Tyr	Arg	Ile	Thr	Cys	Thr	Cys	Ser						
	290					295									

<210> 8  
 <211> 2376  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 8

atggaggaag	aaagtcaacg	agtacagagg	aggatcggag	tcctcccaga	agaggctgcc	60
tcccagatcc	tgaagacac	caagttaaga	gtatcatatc	tgggcgtggg	acattgggga	120
tactctgttt	cagttataaa	aagtgtcttc	cagaaaggat	gcaggaggaa	cgatgaggat	180
ataactgcgt	ggtcaatcag	ggaggcttat	ctctattacc	atcttggtt	gaattacatt	240
gaaaacgtaa	aacctgctgc	aaaatcatta	aatacaaata	tggtaaacag	aattaaaatc	300
atagctgtgg	aggataccag	tcctagaagt	atggtggctt	ctaatgagtg	tgtgagaact	360
ctagaaaaat	atgaaaaggg	gaattttagg	caaccagtt	acttgatgga	tgctgccatg	420
aggctagttc	acgcctccag	ttctagagtg	tgctcccaca	tgagagcttt	gtgttgcaag	480
gaagaggaca	gtgataaatt	agggggtatt	tattatgcta	attttaatga	acttgaaact	540

```

cagtgtgtta gtgcagttaa tttttctccc atagaaagaa ttaaacacgt cttcagggag 600
attgaaagt taaaattggg gaagaaaagt gtacagttat taaatttaag aagtgtagca 660
gcttaccatg tgtaagata ttatggggat aaagtgaag atacaaataa gaaacatagt 720
ggaccattca agcgaaga gtttgagcag ttttgggggt tatgctttaa atttgttact 780
cagcacgtaa aaacagacccc tgaattacgt tgttatttta atgagttgac atatgccata 840
aattggagaa gggatttttt ctgctcaaaa gggttcttta gagaagaaag tctattcctt 900
acatctattg tggaattaat tatagccatg tgcataagg accgtaaaca gtttgccaag 960
attcagaaaa gggattttaa acgtttcaat aaaggagaag aaggagaaa agaagaggct 1020
gctacatttg attggataga aggacatgtt aaacggatgc ctcaaagcc tgtatgggtt 1080
ctggacaaac atacgaacaa aaacacacat ggagtatctt ttgccctaga gagtagtatg 1140
gtttctggag gagacaagcg ctgggtcccca ggggtgtggc ttcattctta tacaagatg 1200
cgtctagatt ctccccctcc cccagaagtg ggccaatttc tggatcaggc ttttaataca 1260
ttgaagcgag aagctgctag tcattgcgta acgaggaata tttgtactac tacaggattt 1320
ataaaggctt ctagttttac tgctaataat aattctgaac cgatggaaat taaggaagaa 1380
ataaagaaaa gaaaaattga gattaaggat gataatacta ctgctactgt tactgttagt 1440
gctactacta gtagttctat tacttctact ccacctccta caaagaaaca aaaaacaact 1500
ccaagtggaa gcaataaagt agactctata caattgaata atctaccaac tttaaatatg 1560
gaggatttag atagagtact agaagtacac aaccaaaact ctaaaaaggg tgtagctgct 1620
acagttttaa tgaaggatgg aaataaagtt gtgtttaagg agatgagaaa aagctttggg 1680
tgggttcttc atcagaattt tgttcaagta ctaaaggatg aagatgtgtg taaattggac 1740
tatttgttgc catgccctga tagcggacca tacagaggat tatacagatg ctatttcaaa 1800
atagtaaagg atgaaatttc gagtacagct gctaggatag aaaaagtga atggggagaa 1860
aatgccatgt gttatttcat ctctgggtgt gtgactagac aagaaggaat tgggaaaatt 1920
ataacagatg tgcgcctttc acatatggga ccaaataaac aatatgtgta tgataactat 1980
aggcaattaa tacacatttt aatttttaga ttgttgactg gtgtgagtga taccaacaca 2040
tcaaacattc tcgtagggtga tggaggaaac ttgttctctg tggacgagaa ttatgtgggc 2100
gcaaaggatc cgaggacagc tctcgaaaat agaaagataa aggaactaca attgctactg 2160
aagacttcct ttaaggtaaa caaggtaaca aaggaagata tagatagctg tcttccatct 2220
tggctatttg atacatcaaa aagtgataaa ataatgaatg gtgtatgtaa tattggtaaa 2280
aatatgggaa ttgggtccac tactttggat attgtaaaga ataattgtac ttgtatttta 2340
gggtcgtga atgacctgct ttatgacaac aaataa 2376

```

<210> 9  
 <211> 785  
 <212> PRT  
 <213> SHRIMP

```

<400> 9
Met Glu Glu Glu Ser Gln Arg Val Gln Arg Arg Ile Gly Val Leu Pro
 1          5          10          15
Glu Glu Ala Ala Ser Gln Ile Leu Lys Asp Thr Lys Leu Arg Val Ser
 20          25          30
Tyr Leu Gly Val Gly His Trp Gly Tyr Ser Val Ser Val Ile Lys Ser
 35          40          45
Ala Leu Gln Lys Gly Cys Arg Arg Asn Asp Glu Asp Ile Thr Ala Trp
 50          55          60
Ser Ile Arg Glu Ala Tyr Leu Tyr Tyr His Leu Gln Tyr Ile Glu Asn
 65          70          75          80
Val Lys Pro Ala Ala Lys Ser Leu Asn Thr Asn Met Val Asn Arg Ile
 85          90          95
Lys Ile Ile Ala Val Glu Asp Thr Ser Pro Arg Ser Met Val Asn Glu
100          105          110
Cys Val Arg Thr Leu Glu Lys Tyr Glu Lys Gly Asn Phe Arg Gln Pro
115          120          125
Ser Tyr Leu Met Asp Ala Ala Met Arg Leu Val His Ala Ser Ser Ser
130          135          140
Arg Val Cys Ser His Met Arg Ala Leu Cys Cys Lys Glu Glu Asp Ser
145          150          155          160
Asp Lys Leu Gly Gly Ile Tyr Tyr Ala Asn Phe Asn Glu Leu Glu Thr
165          170          175
Gln Cys Val Ser Ala Val Asn Phe Ser Pro Ile Glu Arg Ile Lys His

```

**PCT/US00/28888**

			180					185					190			
Val	Phe	Arg	Glu	Ile	Glu	Ser	Val	Lys	Leu	Gly	Lys	Lys	Ser	Val	Gln	
		195					200					205				
Leu	Leu	Asn	Leu	Arg	Ser	Val	Ala	Ala	Tyr	His	Val	Leu	Arg	Tyr	Tyr	
		210				215					220					
Gly	Asp	Lys	Val	Lys	Asp	Thr	Asn	Lys	Lys	His	Ser	Gly	Pro	Phe	Lys	
225					230					235					240	
Arg	Lys	Glu	Phe	Glu	Gln	Phe	Trp	Gly	Leu	Cys	Phe	Lys	Phe	Val	Thr	
				245					250					255		
Gln	His	Val	Lys	Thr	Asp	Pro	Glu	Leu	Arg	Cys	Tyr	Phe	Asn	Glu	Leu	
			260					265					270			
Thr	Tyr	Ala	Ile	Asn	Trp	Arg	Arg	Asp	Phe	Phe	Cys	Ser	Lys	Gly	Phe	
		275					280					285				
Phe	Arg	Glu	Glu	Ser	Leu	Phe	Leu	Thr	Ser	Ile	Val	Glu	Leu	Ile	Ile	
		290				295					300					
Ala	Met	Cys	Ile	Gly	Asp	Arg	Lys	Gln	Phe	Ala	Lys	Ile	Gln	Lys	Arg	
305					310					315					320	
Asp	Leu	Lys	Arg	Phe	Asn	Lys	Gly	Glu	Glu	Gly	Arg	Lys	Glu	Glu	Ala	
				325					330					335		
Ala	Thr	Phe	Asp	Trp	Ile	Glu	Gly	His	Val	Lys	Arg	Met	Pro	Gln	Met	
			340					345					350			
Pro	Val	Trp	Val	Leu	Asp	Lys	His	Thr	Asn	Lys	Asn	Thr	His	Gly	Val	
		355					360					365				
Ser	Phe	Ala	Leu	Glu	Ser	Ser	Met	Val	Ser	Gly	Gly	Asp	Lys	Arg	Trp	
		370				375					380					
Ser	Pro	Gly	Val	Trp	Leu	His	Ser	Tyr	Thr	Lys	Met	Arg	Leu	Asp	Ser	
385				390						395					400	
Pro	Pro	Pro	Pro	Glu	Val	Gly	Gln	Phe	Leu	Asp	Gln	Ala	Phe	Asn	Thr	
				405					410					415		
Leu	Lys	Arg	Glu	Ala	Ala	Ser	His	Cys	Val	Thr	Arg	Asn	Ile	Cys	Thr	
			420					425					430			
Thr	Thr	Gly	Phe	Ile	Lys	Ala	Ser	Ser	Phe	Thr	Ala	Asn	Ile	Asn	Ser	
		435					440					445				
Glu	Pro	Met	Glu	Ile	Lys	Glu	Glu	Ile	Lys	Lys	Arg	Lys	Ile	Glu	Ile	
		450				455					460					
Lys	Asp	Asp	Asn	Thr	Thr	Ala	Thr	Val	Thr	Val	Ser	Ala	Thr	Thr	Ser	
465				470						475					480	
Ser	Ser	Ile	Thr	Ser	Thr	Pro	Pro	Pro	Thr	Lys	Lys	Gln	Lys	Thr	Thr	
			485						490					495		
Pro	Ser	Gly	Ser	Asn	Lys	Val	Asp	Ser	Ile	Gln	Leu	Asn	Asn	Leu	Pro	
			500					505					510			
Thr	Leu	Asn	Met	Glu	Asp	Leu	Asp	Arg	Val	Leu	Glu	Val	His	Asn	Gln	
		515					520					525				
Asn	Ser	Lys	Lys	Gly	Val	Ala	Ala	Thr	Val	Leu	Met	Lys	Asp	Gly	Asn	
		530				535					54					

Asn Thr Ser Asn Ile Leu Val Gly Asp Gly Gly Asn Leu Phe Ser Val  
 675 680 685  
 Asp Glu Asn Tyr Val Gly Ala Lys Asp Pro Arg Thr Ala Leu Glu Asn  
 690 695 700  
 Arg Lys Ile Lys Glu Leu Gln Leu Leu Leu Lys Thr Ser Phe Lys Val  
 705 710 715 720  
 Asn Lys Val Thr Lys Glu Asp Ile Asp Ser Cys Leu Pro Ser Trp Leu  
 725 730 735  
 Phe Asp Thr Ser Lys Ser Asp Lys Ile Met Asn Gly Val Cys Asn Ile  
 740 745 750  
 Gly Lys Asn Met Gly Ile Gly Pro Thr Thr Leu Asp Ile Val Lys Asn  
 755 760 765  
 Asn Cys Thr Cys Ile Leu Gly Val Val Asn Asp Leu Leu Tyr Asp Asn  
 770 775 780  
 Lys  
 785

<210> 10  
 <211> 1857  
 <212> DNA  
 <213> SHRIMP

<400> 10  
 atggccttttaa aagacgcatt caccgagcgg ttagttgtga acaaagttgg ctccggtaca 60  
 gacatggctc cagttgttga agatgaccgc cagaaatctc tcttccaaaa agtgggaaat 120  
 ctttatagag ttctggtagt tgaacagaaa aattctgcaa ttactctctc tggaaacaaa 180  
 aacacaaaaca aaagacaatg ccgccaggta gaagaagaca aagtgatttt tgaaggagag 240  
 gacagaactg tatctaattt accccaagct gttaaagaaa ccatcgcagc caatgcagaa 300  
 tctatactcg attactggta caagaacggt atacctcttc ttgacacgaa gaaagaaaga 360  
 agtgggaaaa gtgatacggt tctgaggact gcagtcactc gtcttgtgag atgttgtgtg 420  
 tcatacaaaag acatgaaaac ttgttcgctg atatatgaat tcgaacacaa aattttaaat 480  
 aagagtacgt tggacccttt attgaaggac attctcgaca acaaacaaga actactacat 540  
 atggattcga aatatgggag taaaactaca tcccctgagc tggcaaagga aaccatcgag 600  
 gccttgtaca cgactgtata taatcactgg acaaacgcct tcaagctcta ccaagcctcg 660  
 ctgactcata aacctgttac gggtaagaaa tatgcatcag tcatacactt tataaggaca 720  
 tggaggaaga tcgtcaaggc ttacgtgtcc aaacacaaca acgtggagag ggatctttca 780  
 ctgaagaaca taatgaagaa tgagagtgtc gataatgcta atgttttaac tattgaaaaa 840  
 atgtacaaga aaatttggtaa cagtgtcaag aacactaata ataatagtgc ccaccaaatg 900  
 tcggacagtg aagatgatga tgatgatgat gacgatgact gtgaaggcat ggatgtttgt 960  
 gatgaagcat cagaaaggga aaagaagcac caagaatctc tatacccaat caacactcca 1020  
 gtcacaacaa tcaactggcg taacatcttt aaagtgtctc tagagcttgt tctttcacc 1080  
 cacatccacc ctgaatggaa aatacctatg tgtgattttg ttaataggaa tatcccaaaa 1140  
 ttaatgaagg ccatggaaac tgacatatca aatgctgtaa tagaagttag agcttcaaag 1200  
 gtgaaccctg tacagatttt acccatcgct gctaacttct gggatttttg taagagcggg 1260  
 aaacctcctt ctgatgtcaa attttgtatg atgtttaatg aaccatcttc taacgagacc 1320  
 ctttcttctg gtgcgggtgt gtttggtcga tttattggag gacccttttc ccacaagagt 1380  
 aaagaatttg acattatttc aaactgtcta agaagtttat tgttgaataa agaagcggac 1440  
 aatctatcta ccagaatttg gagagaagga ggttctgttg tctgttttaa ttactgcccc 1500  
 attactgcca gagtgctgt ttaggggtat ggtgaacaat tgtccgagag atctattaaa 1560  
 gctctgtggg ccaagaaaat ccaggacgct gtaacagaat ctgtcaagag gcaaaggaat 1620  
 gcggctgaca aaaatagtag gaactgtgat ttgttaggag acgaggggtg agtatccatg 1680  
 aaaactgtaa cgtttgatg tgcaaatatg ttgaaaaccc agaacggtat ggggaaattt 1740  
 aatgtagttg taagcttcga ggattctatt caggctaata aggaaggggc ggccagacag 1800  
 tatatgtctc agcaagtttt tactcactca tttccagctc tagatcaagg aaaataa 1857

<210> 11  
 <211> 610  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 11

Met	Ala	Leu	Lys	Asp	Ala	Phe	Thr	Glu	Arg	Leu	Val	Val	Asn	Lys	Val
1				5					10					15	
Gly	Ser	Gly	Thr	Asp	Met	Ala	Pro	Val	Val	Glu	Asp	Asp	Arg	Gln	Lys
			20					25					30		
Ser	Leu	Phe	Gln	Lys	Val	Glu	Asn	Leu	Tyr	Arg	Val	Leu	Val	Val	Glu
		35					40					45			
Gln	Lys	Asn	Ser	Ala	Ile	Thr	Leu	Ser	Gly	Asn	Lys	Asn	Thr	Asn	Lys
	50					55					60				
Arg	Gln	Cys	Arg	Gln	Val	Glu	Glu	Asp	Lys	Val	Ile	Phe	Glu	Gly	Glu
65					70					75					80
Asp	Arg	Thr	Val	Ser	Asn	Leu	Pro	Gln	Ala	Val	Lys	Glu	Thr	Ile	Ala
				85					90					95	
Ala	Asn	Ala	Glu	Ser	Ile	Leu	Asp	Tyr	Trp	Tyr	Lys	Asn	Val	Ile	Pro
			100					105					110		
Leu	Leu	Asp	Thr	Lys	Lys	Glu	Arg	Ser	Gly	Lys	Ser	Asp	Thr	Phe	Leu
		115					120					125			
Arg	Thr	Ala	Val	Ile	Cys	Leu	Val	Arg	Cys	Cys	Val	Ser	Tyr	Lys	Asp
	130					135						140			
Met	Lys	Thr	Cys	Ser	Leu	Ile	Tyr	Glu	Phe	Glu	His	Lys	Ile	Leu	Asn
145					150					155					160
Lys	Ser	Thr	Leu	Asp	Pro	Leu	Leu	Lys	Asp	Ile	Leu	Asp	Asn	Lys	Gln
				165					170					175	
Glu	Leu	Leu	His	Met	Asp	Ser	Lys	Tyr	Gly	Ser	Lys	Thr	Thr	Ser	Pro
			180					185					190		
Glu	Leu	Ala	Lys	Glu	Thr	Ile	Glu	Ala	Leu	Tyr	Thr	Thr	Val	Tyr	Asn
		195					200					205			
His	Trp	Thr	Asn	Ala	Phe	Lys	Leu	Tyr	Gln	Ala	Ser	Leu	Thr	His	Lys
	210					215					220				
Pro	Val	Thr	Gly	Lys	Lys	Tyr	Ala	Ser	Val	Ile	His	Phe	Ile	Arg	Thr
225					230					235					240
Trp	Arg	Lys	Ile	Val	Lys	Ala	Tyr	Val	Ser	Lys	His	Asn	Asn	Val	Glu
				245					250					255	
Arg	Asp	Leu	Ser	Leu	Lys	Asn	Ile	Met	Lys	Asn	Glu	Ser	Ala	Asp	Asn
			260					265					270		
Ala	Asn	Val	Leu	Thr	Ile	Glu	Lys	Met	Tyr	Lys	Lys	Ile	Gly	Asn	Ser
		275					280					285			
Val	Lys	Asn	Thr	Asn	Asn	Asn	Ser	Ala	His	Gln	Met	Ser	Asp	Ser	Glu
	290					295					300				
Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Cys	Glu	Gly	Met	Asp	Val	Cys
305					310					315					320
Asp	Glu	Ala	Ser	Glu	Lys	Lys	His	Gln	Glu	Ser	Leu	Tyr	Pro	Ile	Asn
				325					330					335	
Thr	Pro	Val	Thr	Thr	Ile	Thr	Gly	Asp	Tyr	Ile	Phe	Lys	Val	Leu	Leu
			340					345					350		
Glu	Leu	Val	Leu	Ser	Pro	His	Ile	His	Pro	Glu	Trp	Lys	Ile	Pro	Met
		355					360					365			
Cys	Asp	Phe	Val	Asn	Arg	Asn	Ile	Pro	Lys	Leu	Met	Lys	Ala	Met	Asp
	370					375					380				
Ile	Ser	Asn	Ala	Val	Ile	Glu	Val	Arg	Ala	Ser	Lys	Val	Asn	Pro	Val
385					390					395					400
Gln	Ile	Leu	Pro	Ile	Ala	Ala	Asn	Phe	Trp	Asp	Phe	Cys	Lys	Ser	Gly
				405					410					415	
Lys	Pro	Pro	Ser	Asp	Val	Lys	Phe	Cys	Met	Met	Phe	Asn	Glu	Pro	Ser
			420					425					430		
Ser	Asn	Glu	Thr	Leu	Ser	Ser	Gly	Ala	Gly	Val	Phe	Gly	Arg	Phe	Ile
		435					440					445			
Gly	Gly	Pro	Phe	Ser	His	Lys	Ser	Lys	Glu	Leu	Asp	Ile	Ile	Ser	Asn
	450					455					460				
Cys	Leu	Arg	Ser	Leu	Leu	Leu	Asn	Lys	Glu	Ala	Asp	Asn	Leu	Ser	Thr
465					470					475					480



atggggagta	aacgtccgtg	ctccagcggc	caagagccag	ttaccaaaaa	acaaaagaag	60
aacaacaaca	ataattcaaa	tccagttcca	gttatcaaca	tcaaatcata	cccccttctg	120
gctaccagaa	cccaggtgct	cagaagtgca	gttgtagctg	cagcggcatc	cccttctggg	180
tcttcttctt	cctcctcctc	ctctgtcttct	gcggtcaagc	tcccaataac	gtgcaaggag	240
gccagaaagg	tattgagcac	tgtttcttgg	caacagtctc	tggcagtgag	gtatctgtgc	300
aactcgattt	ctgtgcagta	tgcttggagg	ggaatatctg	tgttccatct	gggtgtgtct	360
cctggagctg	ggaaaactac	aatggtcaag	gaactaattg	cagtctctaa	cgaccacggc	420
ttgattgatt	ctggatctgc	agacatgctc	ctgtgttgca	aatctaattc	tgcaaaggag	480
agtctcatct	gtgcatgcaa	gaaaccagg	ggttcttcct	tgatgtaccc	agaaagtgtg	540
ttttctaccc	tcaacaagg	atttgagatt	ccagttatat	ttaggaaaga	tgaaataact	600
ctagaaaaaa	tccaatttgt	ggcgcataaa	ctaaaattga	aagtataaca	agtgctggca	660
aatttaaggt	tccttgttat	cgatgagtat	acaattggca	gttgcaagga	attggtgttt	720
attgatgctg	ttttacgtat	agcgaaacac	aggccagata	tacctttcgg	aggagtgttt	780
gttatactac	ttggagataa	caggcaaaat	tctgcagtag	tggaagataa	cactaaccat	840
atccagaaga	aaataaagaa	cccgagttag	gaagaaaaac	ctcagaagaa	caacaagaac	900
aacagagaaca	agaagaagaa	gaaagagaag	aaagagaaga	gtggtgaaga	agaaggagga	960
gacgaaaacg	aagaagaaga	gggggaggag	gaggaagaag	aagaagaaga	tgacgatgaa	1020
gctgagacga	agaaagagga	agaaaagagt	accttcttcc	aagggtcagt	cgacaagat	1080
aattttggcc	agaagataa	tgcaaaacta	tacactgaag	ttttataaaa	gatactgaaa	1140
atgttttgct	ctagagactt	ttttggcaac	ccaagtaacc	tgcggaatat	tgtcaataaa	1200
cgcaatgaag	caattttaat	gaagagttaa	aacgtcaagt	cagtttaacaa	caatttagtc	1260
tccaatgtcta	ttaaagttga	agactgtggt	aatgttctta	ataaaaagga	agtgacggca	1320
ccaagttctt	ccccggccca	atccacggca	gaagaaaatt	gtgacgaatt	tgatgacgaa	1380
gaagatgacg	atttctttaa	caatgaagca	tttttgaaac	tgatggaaag	aaatgcactt	1440
gaaaaggaca	gagcatcggg	agctttgaat	ggattctctt	tacgctgcaa	gagcatttct	1500
gatgcaaacg	aaaagataag	aagtggaaac	acttctgtat	cagacaagaa	gtcttctttg	1560
gatatgatga	aatctctccc	cctttccgct	ctaataagaag	aaggaatatg	ttcagagcta	1620
gctcacatga	ctgaactcaa	gaaaatgagc	aatgcaaatc	tagaaaaagta	cactgaaaaa	1680
gatatgcagta	ttgtgttcga	catgatggcc	aaagccatga	gagaaattga	ttacagtggc	1740
cgagaaaaat	tgtatatgtt	ttctagccta	tcagagagat	ttaaggatac	acatctgacc	1800
tccttaatgg	atgaagagat	attgaacgtc	aagtatgtgc	acggttctga	tcccaagtgt	1860
atagatgcag	taccattcaa	ttctgcacat	aaccgtgcgt	ctgctgtggc	agcgtgtgtg	1920
aggaacgcct	tctttagaga	tggaaaagac	tttgtggatg	aaactcctat	cgctaattac	1980
tttaaagata	atttgcgtac	agttgcttca	tttttagaga	atgaaacttt	aacataacaa	2040
gaactactag	cgaaatctga	aaataataaq	tctattctct	tgaagaaaqa	aactqgtaat	2100

aataatagtg	catcatcacg	tacagctgca	gcagcagctt	attatgagga	cgacgaggac	2160
tattgttatt	tcgatgaaga	agaagcaatg	gatttggaag	acggagggaag	tggagggttct	2220
ggtatgaaaa	gtagtgttg	gggagggtgat	gacgatgatg	aagaaagtgg	agaaatgata	2280
tatagaactg	atataccaga	taaattgcac	cgtgacgcat	ctactctaga	tcgtgtaggt	2340
catttagttg	actttcatgt	tgtgtggaaa	aaatggctca	ctgaaaaataa	gccttcagat	2400
ttggtacgag	cccgtgtgtg	gtatttgtat	acactagtga	gaatgcaaca	ggttaaattt	2460
gataatggaa	aactcccttc	tcttgataaa	tctgcactgt	ctggacgctt	gttccactcg	2520
ccctcagaat	gggccacaag	cacaggagta	ggagtaggag	gaggaggagg	agcaggggca	2580
gataagcctc	tccatgacga	atattgggtg	agggtattat	ctatgcccat	atcaacagga	2640
ggagatgtag	ggaagagtat	gttattacct	gcataattctt	cctatctttc	tgccctttcg	2700
agaacatata	tcatgtcgtc	gttaaagaga	atagacatta	ttaagcacgc	ttattcgta	2760
atgtacggta	tttcattggt	tgatatgact	gccaaccttc	aagacttggg	agatacgcg	2820
atggccggta	gatcatccag	aaatgggagt	gttttcattg	acaactttga	cccagtgcaa	2880
tattttgata	acatcttccc	ttcaatgggt	aacgaatttc	ttatgtacag	aaaggaagt	2940
gttttcaata	atggtcaaat	gatggagggt	gttaagggtg	gtttaaagat	ttccagagt	3000
cttcaactg	ctcacactga	aaataacaac	attaacaata	ggcacaataa	ctcacttaaa	3060
tactctgaaa	aatctatagt	gttggccatg	caaatggtga	ctagtatttc	aaagggaaat	3120
gagaggagga	agaagattga	agagtttata	acaaaagaac	aagggcagcc	taaggatatg	3180
tgtgaacgcc	tcattggcaa	ctctaaagcc	aaacaagaaa	aggatgcaat	ttcttccaa	3240
actgacaaga	tgatgggtgc	aatcacactc	actaaaaaac	acgtttttaa	gaatgcagtc	3300
tcgaatttag	tggatacttc	tatcatcaaa	gaaactaaaa	agaacaataa	caattcctca	3360
tcttctctt	ctacttcaat	tgcagcggct	gcggcagttg	aaaattctgt	gcccgcatta	3420
agagtggaa	taaaatttgt	agttttgaat	atggatctgt	ctgacattag	ccacgagaaa	3480
accatctctc	acaagtaccg	gcaacaatta	attaacgcc	ttaaaactcg	cagtacacca	3540
ctttttgaca	agtttacaga	caggaaaatt	ttgaggcgag	ccgaatctcc	tagggcatta	3600
actacgattc	ttttggatga	gaaaaagaag	gtaactagg	ctaaatctat	tactctttat	3660
cagggccaaa	atgtgatttt	cactacatct	aatagaatga	tccatggcac	tcaggaaagg	3720
ttcgtgacta	aggacactgg	agtggttact	aatttaattg	acaagaatgg	tgaattgaca	3780
gtatttgtgt	acgtggaacg	gctaggacaa	aaatgcctag	aaattaaaga	aggacgacaa	3840
attatcggt	atccaaatat	caagaatgga	ggatttgga	acaatgtata	cgttcaatat	3900
cttccatttg	aatctagtca	agccatgacg	atatattctt	gccaaaggca	cactttcttt	3960
agagacacta	ttgttgacct	ttctggtgca	tctaccagg	atgctgtatg	tgctcttacc	4020
cgcaatagta	atcctcaaaa	cttgttcatt	attcaaaatc	attctgttga	acggggtaac	4080
ttgtgtaaca	ttaaatgcgc	catgagtaaa	gacaaggctt	atactatgcc	tattggaggc	4140
attgctgatt	ttaatgggag	cgactttatt	aaccacgata	cagttagtgt	ctctagagag	4200
gtggcagaat	cttcgcgtgc	aatggatgat	gactataatg	gagatggagg	agtaacaatg	4260
tattctgcct	atgacccttc	taaagatgtg	gtagctgccg	ctgaagaatt	catcctaagt	4320
agatcgggaa	aatctttatc	gtttaatgcg	tcttggatgg	ccaacactgc	taaggttatt	4380
cagcaacatg	ggctagaaac	agaacttaaa	aacattagag	actttttctt	tgggtttaat	4440
aatggagatg	tggctaaaca	ttatgagaaa	ttatgtaaca	agaaaatgat	tgagctatac	4500
actgctatcg	ttcgttcaat	cacacactac	tctatagcca	gtggtattgt	aaaacagccc	4560
tcttcaaagt	tgtgtgaaga	atatgagacg	aaacaaaaga	acaagaaaga	ctatatcaaa	4620
atacaccag	tttttgtgaa	tagggcacca	aaggagtcca	ctattgaaat	gttgttgttt	4680
gatattgcac	cccataacaa	ggctacaatt	gtgttccaat	tttatgtcca	ttatatattt	4740
ttagtgtatg	aaaaattgaa	cgttttgaat	tcttcattcg	cctttttgcc	atctcccaat	4800
ccgtgcctga	atcagtatgt	acgccccaaa	tcaattacca	ccaattctac	tcattgtacca	4860
aatctgggtt	acgagtctaa	agattttgcc	cattgcaagg	acgggggaga	aagagatgtc	4920
aaattgcgtc	ttcctataac	aagcgcggtg	gagttttcaa	ataacattga	aggatattttg	4980
aaaaaagtta	gtgacacatc	taatcaaaat	aagggttaata	aatacatgga	tgttgtatgt	5040
aagagtatgc	agcacaactt	gcgtaggact	ggtaaatttt	gtcgtcctac	ggaaacttgt	5100
ggtctatcga	aacatgggtc	tattgtaacg	tccacatgca	cagctcaaga	gaagggagaa	5160
aatatccatg	tagatgcaga	aaagggatgg	ctgtgtatgt	cagacgaagc	taatgtatat	5220
tgtatgttaa	tgttcatgtc	aaaaatagca	gcagcttctg	gtgttagtga	attccccatt	5280
aaggacaaaa	gtattcttga	aagtaaccca	gaaacaccat	ctgatacgat	tagtcttttg	5340
gcaccaagaa	agacaatttc	acctactaac	aatctccact	tttcaatgtc	tgaagatgtc	5400
ctgttctgtg	gacaagttca	tccaatgaaa	agggatacaat	tttctttgca	tgtaaagaga	5460
actggaggag	cactgaaaag	tacttttgag	gagaagaag	gtcttccac	aaagatatcc	5520
tctcccaact	ttgccacata	tctctatttc	aaaaaatgta	aaatgtatgg	tgctataatc	5580
attgccatga	ctgaaatgca	agggcatgaa	tttgccaagt	attcaacatt	ggatatcaga	5640
aagagcatgt	ttactggtgt	tggaaactgtg	gtggattttg	aaaagatatc	aggagaaggt	5700
aatgaagtaa	tggataaagt	tgacaaaattt	atttgtgaaa	atgtatcaaa	catattgttt	5760

aaggaacaag ggaagcgtgt ctctttcttt gtttcatgtg ctatacacta g

5811

<210> 13  
 <211> 1926  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 13

Met	Gly	Ser	Lys	Arg	Pro	Cys	Ser	Ser	Gly	Gln	Glu	Pro	Val	Thr	Lys
1				5					10					15	
Lys	Gln	Lys	Lys	Asn	Asn	Asn	Asn	Asn	Ser	Asn	Pro	Val	Pro	Val	Ile
			20					25					30		
Asn	Ile	Lys	Ser	Tyr	Pro	Phe	Leu	Ala	Thr	Arg	Thr	Gln	Val	Leu	Arg
		35					40					45			
Ser	Ala	Val	Ala	Ala	Ala	Ala	Asp	Ser	Gly	Ser	Ser	Ser	Ser	Ser	Ser
		50				55					60				
Ser	Ser	Ala	Ser	Ala	Val	Lys	Leu	Pro	Asp	Thr	Cys	Lys	Glu	Ala	Arg
65					70					75				80	
Lys	Val	Leu	Ser	Thr	Val	Ser	Leu	Gln	Gln	Ser	Leu	Ala	Val	Arg	Tyr
				85					90					95	
Leu	Cys	Asn	Ser	Ile	Ser	Val	Ser	Tyr	Ala	Gly	Gly	Gly	Ile	Ser	Val
			100					105					110		
Phe	His	Leu	Gly	Gly	Leu	Pro	Gly	Ala	Gly	Lys	Thr	Thr	Met	Val	Lys
		115					120					125			
Glu	Leu	Ile	Ala	Val	Leu	Asn	Asp	His	Gly	Leu	Ile	Asp	Ser	Gly	Ser
	130					135					140				
Ala	Asp	Met	Leu	Leu	Cys	Cys	Lys	Ser	Asn	Ser	Ala	Lys	Glu	Ser	Leu
145					150					155					160
Met	Cys	Ala	Cys	Lys	Lys	Pro	Gly	Gly	Ser	Ser	Leu	Met	Tyr	Pro	Glu
				165					170					175	
Ser	Val	Phe	Ser	Thr	Leu	Asn	Lys	Gly	Phe	Glu	Ile	Pro	Val	Ile	Phe
			180					185					190		
Arg	Lys	Asp	Glu	Ile	Thr	Leu	Glu	Lys	Ile	Gln	Phe	Val	Ala	Asp	Lys
		195					200					205			
Leu	Lys	Trp	Lys	Val	Ile	Gln	Val	Leu	Ala	Asn	Leu	Arg	Phe	Leu	Val
		210				215					220				
Ile	Asp	Glu	Tyr	Thr	Met	Ala	Ser	Cys	Arg	Glu	Leu	Val	Phe	Ile	Asp
225					230					235					240
Ala	Val	Leu	Arg	Ile	Ala	Lys	His	Arg	Pro	Asp	Ile	Pro	Phe	Gly	Gly
				245					250					255	
Val	Phe	Val	Ile	Leu	Leu	Gly	Asp	Asn	Arg	Gln	Asn	Ser	Ala	Val	Val
			260					265					270		
Glu	Asp	Asn	Thr	Asn	His	Ile	Gln	Lys	Lys	Ile	Lys	Asn	Pro	Ser	Glu
		275					280					285			
Glu	Glu	Lys	Pro	Gln	Lys	Asn	Asn	Lys	Asn	Asn	Lys	Asn	Lys	Lys	Lys
		290				295					300				
Lys	Lys	Glu	Lys	Lys	Glu	Lys	Gly	Gly	Glu	Glu	Glu	Glu	Gly	Asp	Glu
305					310					315					320
Asn	Glu	Glu	Glu	Glu	Gly	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Ser	Asp
				325					330					335	
Asp	Glu	Ala	Glu	Thr	Lys	Lys	Glu	Glu	Glu	Lys	Ser	Thr	Phe	Phe	Gln
			340					345					350		
Gly	Ser	Val	Glu	Gln	Asp	Asn	Phe	Gly	Gln	Glu	Asp	Asn	Ala	Lys	Leu
		355					360					365			
Tyr	Thr	Glu	Val	Phe	Ile	Lys	Ile	Leu	Lys	Met	Phe	Cys	Ser	Arg	Asp
		370				375					380				
Phe	Phe	Gly	Asn	Pro	Ser	Asn	Leu	Arg	Asn	Ile	Val	Asn	Lys	Arg	His
385					390					395					400
Glu	Ala	Ile	Leu	Met	Lys	Ser	Asn	Asn	Val	Lys	Ser	Val	Asn	Asn	Asn
				405					410					415	
Leu	Val	Ser	Ser	Ala	Ile	Lys	Val	Glu	Asp	Cys	Gly	Asn	Asn	Lys	Lys

			420					425					430			
Glu	Val	Thr	Ala	Pro	Ser	Ser	Ser	Pro	Ala	Gln	Ser	Thr	Ala	Glu	Glu	
		435					440					445				
Asn	Cys	Asp	Glu	Phe	Asp	Asp	Glu	Glu	Asp	Asp	Asp	Phe	Phe	Asn	Asn	
	450					455					460					
Glu	Ala	Phe	Leu	Lys	Leu	Met	Glu	Arg	Asn	Ala	Leu	Glu	Lys	Asp	Arg	
465					470					475					480	
Ala	Ser	Gly	Ala	Leu	Asn	Gly	Phe	Ser	Leu	Arg	Cys	Lys	Ser	Ile	Ser	
			485						490					495		
Asp	Ala	Asn	Glu	Lys	Ile	Arg	Ser	Gly	Thr	Thr	Ser	Val	Ser	Asp	Lys	
		500						505				510				
Lys	Ser	Ser	Leu	Asp	Met	Met	Lys	Ser	Leu	Pro	Leu	Ser	Ala	Leu	Ile	
		515					520					525				
Glu	Glu	Gly	Ile	Cys	Ser	Glu	Leu	Ala	His	Glu	Leu	Lys	Lys	Met	Ser	
	530					535					540					
Asn	Ala	Asn	Leu	Glu	Lys	Tyr	Thr	Glu	Asn	Val	Cys	Ser	Ile	Val	Phe	
545					550					555					560	
Asp	Met	Met	Ala	Lys	Ala	Met	Arg	Glu	Ile	Asp	Tyr	Ser	Gly	Arg	Glu	
			565						570					575		
Lys	Leu	Tyr	Ile	Val	Ser	Ser	Leu	Ser	Phe	Lys	Asp	Thr	His	Leu	Thr	
			580					585					590			
Ser	Leu	Met	Asp	Glu	Glu	Ile	Leu	Asn	Val	Lys	Tyr	Val	His	Gly	Ser	
		595					600					605				
Asp	Pro	Lys	Cys	Ile	Asp	Ala	Val	Pro	Phe	Asn	Ser	Ala	His	Asn	Arg	
	610					615					620					
Ala	Ser	Ala	Val	Ala	Ala	Cys	Val	Arg	Asn	Ala	Phe	Phe	Arg	Asp	Gly	
625					630					635					640	
Lys	Asp	Phe	Val	Asp	Glu	Thr	Pro	Ile	Ala	Asn	Tyr	Phe	Lys	Asp	Asn	
			645						650					655		
Leu	Arg	Thr	Val	Ala	Ser	Phe	Leu	Glu	Asn	Glu	Thr	Leu	Thr	Tyr	Lys	
			660					665					670			
Glu	Leu	Leu	Ala	Lys	Ser	Glu	Asn	Ile	Arg	Ser	Ile	Leu	Leu	Lys	Lys	
		675					680					685				
Glu	Thr	Gly	Asn	Asn	Asn	Ser	Ala	Ser	Ser	Arg	Thr	Ala	Ala	Ala	Ala	
	690					695					700					
Ala	Tyr	Tyr	Glu	Asp	Asp	Glu	Asp	Tyr	Cys	Tyr	Phe	Asp	Glu	Glu	Glu	
705					710					715					720	
Ala	Met	Asp	Leu	Glu	Asp	Gly	Gly	Ser	Gly	Gly	Ser	Gly	Met	Lys	Ser	
			725						730					735		
Ser	Gly	Gly	Gly	Gly	Asp	Asp	Asp	Asp	Glu	Glu	Ser	Gly	Glu	Met	Ile	
			740					745					750			
Tyr	Arg	Thr	Asp	Ile	Pro	Asp	Lys	Leu	His	Arg	Asp	Ala	Ser	Thr	Leu	
		755														

Met	Tyr	Gly	Ile	Ser	Leu	Phe	Asp	Met	Thr	Ala	Asn	Leu	Gln	Asp	Leu	915	920	925
Val	Asp	Thr	Arg	Met	Ala	Gly	Arg	Ser	Ser	Arg	Asn	Gly	Ser	Val	Phe	930	935	940
Met	Asp	Asn	Phe	Asp	Pro	Val	Gln	Tyr	Phe	Asp	Asn	Ile	Phe	Pro	Ser	945	950	955
Met	Val	Asn	Glu	Phe	Leu	Met	Tyr	Arg	Lys	Glu	Asp	Val	Phe	Asn	Asn	965	970	975
Gly	Gln	Met	Met	Glu	Gly	Val	Lys	Gly	Ser	Leu	Lys	Ile	Ser	Arg	Val	980	985	990
Leu	Gln	Thr	Ala	His	Thr	Glu	Asn	Asn	Asn	Ile	Asn	Asn	Arg	His	Asn	995	1000	1005
Asn	Ser	Leu	Lys	Tyr	Ser	Glu	Lys	Ser	Ile	Val	Leu	Ala	Met	Gln	Met	1010	1015	1020
Val	Thr	Ser	Ile	Ser	Lys	Gly	Asn	Glu	Arg	Arg	Lys	Lys	Ile	Glu	Glu	1025	1030	1035
Phe	Ile	Thr	Lys	Glu	Gln	Gly	Gln	Pro	Lys	Asp	Met	Cys	Glu	Arg	Leu	1045	1050	1055
Met	Ala	Asn	Ser	Lys	Ala	Lys	Gln	Glu	Lys	Asp	Ala	Ile	Ser	Ser	Lys	1060	1065	1070
Thr	Asp	Lys	Met	Met	Gly	Ala	Ile	Thr	Leu	Thr	Lys	Lys	His	Val	Leu	1075	1080	1085
Lys	Asn	Ala	Val	Ser	Asn	Leu	Val	Asp	Thr	Ser	Ile	Ile	Lys	Glu	Thr	1090	1095	1100
Lys	Lys	Asn	Asn	Asn	Asn	Ser	Ser	Ser	Ser	Ser	Ser	Thr	Ser	Leu	Ala	1105	1110	1115
Ala	Ala	Ala	Ala	Val	Glu	Asn	Ser	Val	Pro	Ala	Leu	Arg	Val	Glu	Val	1125	1130	1135
Lys	Phe	Val	Val	Leu	Asn	Met	Asp	Leu	Ser	Asp	Ile	Ser	His	Glu	Lys	1140	1145	1150
Thr	Ile	Ser	His	Lys	Tyr	Arg	Gln	Gln	Leu	Ile	Asn	Ala	Ile	Lys	Thr	1155	1160	1165
Arg	Ser	Thr	Pro	Leu	Phe	Asp	Lys	Phe	Thr	Asp	Arg	Lys	Ile	Leu	Arg	1170	1175	1180
Ala	Ala	Glu	Ser	Pro	Arg	Ala	Leu	Thr	Thr	Ile	Leu	Leu	Asp	Glu	Lys	1185	1190	1195
Lys	Lys	Val	Thr	Arg	Ala	Lys	Ser	Ile	Thr	Leu	Tyr	Gln	Gly	Gln	Asn	1205	1210	1215
Val	Ile	Phe	Thr	Thr	Ser	Asn	Arg	Met	Ile	His	Gly	Thr	Gln	Glu	Arg	1220	1225	1230
Phe	Val	Thr	Lys	Asp	Thr	Gly	Val	Val	Thr	Asn	Leu	Met	Tyr	Lys	Asn	1235	1240	1245
Gly	Glu	Leu	Thr	Val	Phe	Val	Tyr	Val	Glu	Arg	Leu	Gly	Gln	Lys	Cys	1250	1255	1260
Leu	Glu	Ile	Lys	Glu	Gly	Arg	Gln	Ile	Ile	Gly	Asn	Pro	Asn	Ile	Lys	1265	1270	1275
Asn	Gly	Gly	Phe	Gly	Asn	Asn	Val	Tyr	Val	Gln	Tyr	Leu	Pro	Phe	Glu	1285	1290	1295
Ser	Ser	Gln	Ala	Met	Thr	Ile	Tyr	Ser	Cys	Gln	Gly	His	Thr	Phe	Phe	1300	1305	1310
Arg	Asp	Thr	Ile	Val	Asp	Leu	Ser	Gly	Ala	Ser	Thr	Gln	Asp	Ala	Tyr	1315	1320	1325
Val	Ala	Val	Thr	Arg	Asn	Ser	Asn	Pro	Gln	Asn	Leu	Phe	Ile	Ile	Gln	1330	1335	1340
Asn	His	Ser	Val	Glu	Arg	Gly	Asn	Leu	Cys	Asn	Ile	Lys	Cys	Ala	Met	1345	1350	1355
Ser	Lys	Asp	Lys	Ala	Tyr	Thr	Met	Pro	Ile	Gly	Gly	Ile	Ala	Asp	Phe	1365	1370	1375
Asn	Gly	Ser	Asp	Phe	Ile	Asn	His	Asp	Thr	Val	Ser	Val	Ser	Arg	Glu	1380	1385	1390
Val	Ala	Glu	Ser	Ser	Ala	Ala	Met	Asp	Asp	Asp	Tyr	Asn	Gly	Asp	Gly			

1395					1400					1405						
Gly	Val	Thr	Met	Tyr	Ser	Ala	Tyr	Asp	Pro	Ser	Lys	Asp	Val	Val	Ala	
1410					1415					1420						
Ala	Ala	Glu	Glu	Phe	Ile	Leu	Ser	Arg	Ser	Gly	Lys	Ser	Leu	Ser	Phe	
1425					1430					1435					1440	
Asn	Ala	Ser	Trp	Met	Ala	Asn	Thr	Ala	Lys	Val	Ile	Gln	Gln	His	Gly	
1445					1450					1455						
Leu	Glu	Thr	Glu	Leu	Lys	Asn	Ile	Arg	Asp	Phe	Phe	Phe	Gly	Val	Asn	
1460					1465					1470						
Asn	Gly	Asp	Val	Ala	Lys	His	Tyr	Glu	Lys	Leu	Cys	Asn	Lys	Lys	Met	
1475					1480					1485						
Ile	Glu	Leu	Tyr	Thr	Ala	Ile	Val	Arg	Ser	Ile	Thr	His	Tyr	Ser	Ile	
1490					1495					1500						
Ala	Ser	Gly	Ile	Val	Lys	Gln	Pro	Ser	Ser	Lys	Leu	Cys	Glu	Glu	Tyr	
1505					1510					1515					1520	
Glu	Thr	Lys	Gln	Lys	Asn	Lys	Lys	Asp	Tyr	Ile	Lys	Ile	His	Pro	Val	
1525					1530					1535						
Phe	Val	Asn	Arg	Ala	Pro	Lys	Glu	Ser	Thr	Ile	Glu	Met	Leu	Leu	Phe	
1540					1545					1550						
Asp	Ile	Ala	Pro	His	Asn	Lys	Ala	Thr	Ile	Val	Phe	Gln	Phe	Tyr	Val	
1555					1560					1565						
His	Tyr	Ile	Phe	Leu	Val	Tyr	Glu	Lys	Leu	Asn	Val	Leu	Asn	Ser	Ser	
1570					1575					1580						
Phe	Ala	Phe	Leu	Pro	Ser	Pro	Asn	Pro	Cys	Leu	Asn	Gln	Tyr	Val	Arg	
1585					1590					1595					1600	
Pro	Lys	Ser	Ile	Thr	Thr	Asn	Ser	Thr	His	Val	Pro	Asn	Leu	Gly	Tyr	
1605					1610					1615						
Glu	Ser	Lys	Asp	Phe	Ala	His	Cys	Lys	Asp	Gly	Gly	Glu	Arg	Asp	Val	
1620					1625					1630						
Lys	Leu	Arg	Leu	Pro	Ile	Thr	Ser	Ala	Asp	Glu	Phe	Ser	Asn	Asn	Ile	
1635					1640					1645						
Glu	Gly	Ile	Leu	Lys	Lys	Val	Ser	Asp	Thr	Ser	Asn	Gln	Asn	Lys	Val	
1650					1655					1660						
Asn	Lys	Tyr	Met	Asp	Val	Val	Cys	Lys	Ser	Met	Gln	His	Asn	Leu	Arg	
1665					1670					1675					1680	
Arg	Thr	Gly	Lys	Phe	Cys	Arg	Pro	Thr	Glu	Thr	Cys	Gly	Leu	Ser	Lys	
1685					1690					1695						
His	Gly	Ser	Ile	Val	Thr	Ser	Thr	Cys	Thr	Ala	Gln	Glu	Lys	Gly	Glu	
1700					1705					1710						
Asn	Ile	His	Val	Asp	Ala	Glu	Lys	Gly	Trp	Leu	Cys	Met	Ser	Asp	Glu	
1715					1720					1725						
Ala	Asn	Val	Tyr	Cys	Met	Leu	Met	Phe	Met	Ser	Lys	Ile	Ala	Ala	Ala	
1730					1735					1740						
Ser	Gly	Val	Ser	Glu	Phe	Pro	Ile	Lys	Asp	Lys	Ser	Ile	Ser	Asn	Pro	
1745					1750					1755					1760	
Glu	Thr	Pro	Ser	Asp	Thr	Ile	Ser	Leu	Leu	Ala	Pro	Arg	Lys	Thr	Ile	
1765					1770					1775						
Ser	Pro	Thr	Asn	Asn	Leu	His	Phe	Ser	Met	Ser	Glu	Asp	Val	Leu	Phe	
1780					1785					1790						
Cys	Gly	Gln	Val	His	Pro	Met	Lys	Arg	Val	Gln	Phe	Ser	Leu	His	Val	
1795					1800					1805						
Lys	Arg	Thr	Gly	Gly	Ala	Leu	Lys	Ser	Thr	Phe	Glu	Glu	Glu	Glu	Gly	
1810					1815					1820						
Leu	Pro	Thr	Lys	Ile	Phe	Ser	Pro	Asn	Phe	Ala	Thr	Tyr	Pro	Leu	Phe	
1825					1830					1835					1840	
Lys	Lys	Cys	Lys	Met	Tyr	Gly	Ala	Ile	Ile	Ile	Ala	Met	Thr	Glu	Met	
1845					1850					1855						
Gln	Gly	His	Glu	Phe	Ala	Lys	Tyr	Ser	Thr	Leu	Asp	Ile	Arg	Lys	Ser	
1860					1865					1870						
Met	Phe	Thr	Gly	Val	Gly	Thr	Val	Val	Asp	Leu	Glu	Lys	Ile	Ser	Gly	
1875					1880					1885						

Glu Gly Asn Glu Val Met Asp Lys Val Asp Lys Phe Ile Val Lys Asn  
 1890 1895 1900  
 Val Ser Asn Ile Leu Phe Lys Glu Gln Gly Lys Arg Val Ser Phe Phe  
 1905 1910 1915 1920  
 Val Ser Cys Ala Ile His  
 1925

<210> 14  
 <211> 768  
 <212> DNA  
 <213> SHRIMP

<400> 14  
 atggctggg tagatttgta tggaggacat attaaaccct acggagagac tgtattcaat 60  
 aataaaatgc agggcaacag agggaaaatt agagcactaa taaatgaaaa agcagcagca 120  
 actttaccaa tgtctgaaga caacattagt gcctgggtaa ctgaggtggc tgcggatgtt 180  
 ttccctgatc cgaaatcggc attaaactttt tttgtaccga acaagagcct caatgcgttt 240  
 gcatgggacg tactaaaaac gccagctagc gttgaaattg atatagggaa gagaattcct 300  
 caattgattg aaaatcttca catgagtgat tttacagtgg caatttttag agtaaaatgt 360  
 gatgaccaag ggaggtatga aaccagctac aatttatctc cttctatggg aggaaaaata 420  
 aatcacgggc taatcagaac actggctaag gcccaagata ttgtagtctg gaagagggat 480  
 ttttctctaa caattgagaa ttttgaagta gataatggga aaaaacggct cgattttttg 540  
 ttcaataatc aaacggataa atcttgcttt gtaaagatct tccacgaaat ggaatctgaa 600  
 aaggatatcg caattaagcc tgaaaaaaga ggttcatctg ctgtatggga tgaagtatat 660  
 tccgatatag ttacaaagaa tacgcgtaat gcaaaatttt cattacgata tagaaatgaa 720  
 aaaccagttg atcacctttt attgtactgc atggttacat atttttaa 768

<210> 15  
 <211> 255  
 <212> PRT  
 <213> SHRIMP

<400> 15  
 Met Ala Gly Val Asp Leu Tyr Gly Gly His Ile Lys Pro Tyr Gly Glu  
 1 5 10 15  
 Thr Val Phe Asn Asn Lys Met Gln Gly Asn Arg Gly Lys Ile Arg Ala  
 20 25 30  
 Leu Ile Asn Glu Lys Ala Ala Ala Thr Leu Pro Met Ser Glu Asp Asn  
 35 40 45  
 Ile Ser Ala Trp Val Thr Glu Val Ala Ala Asp Val Phe Pro Asp Pro  
 50 55 60  
 Lys Ser Ala Leu Thr Phe Val Pro Asn Lys Ser Leu Asn Ala Phe  
 65 70 75 80  
 Ala Trp Asp Val Leu Lys Thr Pro Ala Ser Val Glu Ile Asp Ile Gly  
 85 90 95  
 Lys Arg Ile Pro Gln Leu Ile Glu Asn Leu His Met Ser Asp Phe Thr  
 100 105 110  
 Val Ala Ile Phe Arg Val Lys Cys Asp Asp Gln Gly Arg Tyr Glu Thr  
 115 120 125  
 Ser Tyr Asn Leu Ser Pro Ser Met Gly Gly Lys Ile Asn His Gly Leu  
 130 135 140  
 Ile Arg Thr Leu Ala Lys Ala Gln Asp Ile Val Val Trp Lys Arg Asp  
 145 150 155 160  
 Phe Ser Leu Thr Ile Glu Asn Phe Glu Val Asp Asn Gly Lys Lys Arg  
 165 170 175  
 Leu Asp Phe Leu Phe Asn Asn Gln Thr Asp Lys Ser Cys Phe Val Lys  
 180 185 190  
 Ile Phe His Glu Met Glu Ser Glu Lys Asp Ile Ala Ile Lys Pro Glu  
 195 200 205  
 Lys Arg Gly Ser Ser Ala Val Trp Asp Glu Val Tyr Ser Asp Ile Val

210		215		220
Thr Lys Asn Thr Arg Asn Ala Lys Phe Ser Leu	Arg Tyr Arg Asn Glu			
225	230	235	240	
Lys Pro Val Asp His Leu Leu Leu Tyr Cys Met	Val Thr Tyr Phe			
	245	250	255	

<210> 16  
 <211> 348  
 <212> DNA  
 <213> SHRIMP

<400> 16  
 atggcttcgc cattggtggc gtcttttagga ggaggaaaaa atatactttt tggtttactt 60  
 ttaataacaa taattgtcat tggtattgct gtaataataa tcaaggctcc tctcttagca 120  
 tctctcctgg cgggcacagc actggccggc acgatcgctt ctgcgctggg atcaatacca 180  
 ggagtgggcg gtgcattcaa gaaagccttt ggaaaaggaa aggggaaagg aggacaaaaa 240  
 acaccagatg gtggggccaa gaaaactaac caaaaaccaa agaagggtaa gaaaaaaccc 300  
 cccaccgctc gttccatatt caagaggata cctaaaataa aatttttag 348

<210> 17  
 <211> 111  
 <212> PRT  
 <213> SHRIMP

<400> 17  
 Met Asp Leu Val Ala Ser Leu Gly Gly Gly Lys Asn Ile Leu Phe Gly  
 1 5 10 15  
 Leu Leu Leu Ile Thr Ile Ile Val Ile Val Ile Ala Val Ile Ile Ile  
 20 25 30  
 Lys Ala Pro Leu Leu Ala Ser Leu Leu Ala Gly Thr Ala Gly Thr Ile  
 35 40 45  
 Ala Ser Ala Leu Gly Ser Ile Pro Gly Val Gly Gly Ala Phe Lys Lys  
 50 55 60  
 Ala Phe Gly Lys Gly Lys Gly Lys Gly Gly Pro Lys Thr Pro Asp Gly  
 65 70 75 80  
 Gly Ala Lys Lys Thr Asn Gln Lys Pro Lys Lys Gly Lys Lys Lys Pro  
 85 90 95  
 Pro Thr Arg Arg Ser Ile Phe Lys Arg Ile Pro Lys Ile Lys Phe  
 100 105 110

<210> 18  
 <211> 687  
 <212> DNA  
 <213> SHRIMP

<400> 18  
 atggtctctt ctagaacatc aacaacatct tcatctgcag tagcagccac ctctactctt 60  
 ctccccacca agaggaagag ggagccagaa gaagtaaagg tgaaagtgga agtaaaaaatg 120  
 gaacaagaag aactggtaga ggactcgtca agtaacaagc gccccagaat taaggaagag 180  
 aaggaggaag aacacaaaaga aacacatcac ctctccctcc catgtaaaga agaagaagac 240  
 gatggtgaag aagaggaata tgaggaagag gaggatgagg aagaatatga agacagagtg 300  
 gacgacgaca ctgcagagaa aatggaaaat cttttggtgc aactggacaa tactaccaaa 360  
 aacatcaaac tgaaaaaacc cctaagggaa catgacatgg cagtttcaca ctatgagcat 420  
 gaatttgagg taaaaaatac tgtcaatttt agttttggag tactatctga tattgggttc 480  
 ctgatcaacc gtgaagccgt ttctaggtgg ggtaatacac cccacccaaa agagtttggc 540  
 gacatggaga ttggatctct tacagttaac cagttgctcc acaagtgtga taattttgta 600  
 caggctgtag tacagaaagt gaaggaagat ataaccctt ctattgaagt tacaatagat 660  
 agtttgattg atgaccttg ttggtaa 687



<210> 19  
 <211> 228  
 <212> PRT  
 <213> SHRIMP

<400> 19

Met	Val	Ser	Ser	Arg	Thr	Ser	Thr	Thr	Ser	Ser	Ser	Ala	Val	Ala	Ala
1				5					10					15	
Thr	Ser	Thr	Leu	Leu	Pro	Thr	Lys	Arg	Lys	Arg	Glu	Pro	Glu	Glu	Val
			20				25						30		
Lys	Val	Lys	Val	Glu	Val	Lys	Met	Glu	Gln	Glu	Glu	Leu	Val	Glu	Asp
		35					40					45			
Ser	Ser	Ser	Asn	Lys	Arg	Pro	Arg	Ile	Lys	Glu	Glu	Lys	Glu	Glu	Glu
		50					55				60				
His	Lys	Glu	Thr	His	His	Leu	Ser	Leu	Pro	Cys	Lys	Glu	Glu	Glu	Asp
65					70					75					80
Asp	Gly	Glu	Glu	Glu	Glu	Tyr	Glu	Glu	Glu	Glu	Asp	Glu	Glu	Glu	Tyr
				85					90					95	
Glu	Asp	Arg	Val	Asp	Asp	Asp	Thr	Ala	Glu	Lys	Met	Glu	Asn	Leu	Leu
			100					105					110		
Val	Gln	Leu	Asp	Asn	Thr	Thr	Lys	Asn	Ile	Lys	Leu	Lys	Asn	Pro	Leu
		115					120					125			
Arg	Glu	His	Asp	Met	Ala	Val	Ser	His	Tyr	Glu	His	Glu	Phe	Glu	Val
		130				135					140				
Gln	Asn	Thr	Val	Asn	Phe	Ser	Phe	Gly	Val	Leu	Ser	Asp	Ile	Gly	Phe
145					150					155					160
Leu	Ile	Asn	Arg	Glu	Ala	Val	Ser	Arg	Trp	Gly	Asn	Thr	Pro	Pro	Pro
				165					170					175	
Lys	Glu	Phe	Gly	Asp	Met	Glu	Ile	Gly	Ser	Leu	Thr	Val	Asn	Gln	Leu
			180					185					190		
Leu	His	Lys	Cys	Asp	Asn	Phe	Val	Gln	Ala	Val	Val	Gln	Lys	Val	Lys
		195					200					205			
Glu	Asp	Ile	Thr	Pro	Ser	Ile	Glu	Val	Thr	Ile	Asp	Ser	Leu	Ile	Asp
		210				215					220				
Asp	Pro	Cys	Trp												
225															

<210> 20  
 <211> 1698  
 <212> DNA  
 <213> SHRIMP

<400> 20

atggcaaggt	ctgtaggttt	attatctgtg	acacccgagt	atgacacatt	taagtatatc	60
aaaatggaag	aattcaagac	tttaaaggta	aaaaatggat	tcactatttc	tggtgaaaac	120
cctgacaaat	acgaacatat	tctattatca	ttcaaactcg	ttgatagggt	tacaaaaagt	180
gaattaaggg	acggactata	tatagtcctg	ctaaaagata	aggaagtact	tcacataaaa	240
aacggagtgc	atagactgag	acaattgaca	ggcgacaata	ctcttcaagt	cggattaaaag	300
tatactcaca	atctccccag	gttagggagt	ttattgcaag	atgatgggtg	tgaggattat	360
ggggaaaagt	ggaacgaatc	actccccatt	gatatgcaaa	atatcaacaa	aatcggttaa	420
gaaaaggccc	ttcttagtga	caaaaacttt	aaattttctc	ctctctacag	gcttttacac	480
gaaagacttt	ctaattgcagc	tgtgaaaaaa	tgtgactata	tgataataac	cactgacttt	540
ttagtagggg	gtggctacac	gccgagccat	tgccctagaa	cacttcgtaa	catggaacaa	600
ttattggtgg	aacaatgtgg	cttttcttcc	cgcataatcag	tgtatgatat	atgtgatagg	660
ttaacatata	aaggggccta	cattgcaaac	ccaatcacag	gcagttactc	caacatgtgc	720
ctaattgttc	caatggataa	actaggtttg	attttctaca	acagtacaca	cccatcagct	780
aaaagtattg	gaaattatat	gtcatctctt	ttcaatgcaa	ccgtcatata	cgcaaatgaa	840
agggataatt	tacagatgga	taatttcaga	agagaaataa	agtttgcaga	gaatgaagta	900
aatatgaagg	aagaagaact	gaaggaattg	aggaaacgtt	gtgccgtctc	tgaagaacaa	960
aggatttctt	tgagggatgt	gcacaaaaaa	tcatcgattg	cgacatcccg	ctatgatggt	1020

```

ggagcctgct tagtggttgc tttttctgac cgagatttct ccttgctatg cagaaccaac 1080
ggaaatgggt cctttttattc tgcaacagaa gaaggaatca ggtatgtctc ttcacctgaa 1140
tataaaaaga gagatgtggg agaacgtagg ccccgtttga tcatgtccat aactggatcg 1200
gatgccccta tatgtattag ggacagtgtg cgaaccact tcaagacgag actttttctcc 1260
cgcaccagtg gcaatagtat aacctttgca gtccctccag gagaaaggga actaatggaa 1320
atggctcagag aggtaacagg aacagacatc aaaattttca tggataatgg aaaagtatat 1380
caaatgggtg ccgaaatcaa tgtgattgat ccgacatcta aggaatacaa agagttactc 1440
aaaaggggaag aaaacttgcc cgaagacgaa cggaagcggt tgcggcgaga acgacgcatg 1500
attttcaata cgtcaagggc aatttccatg tataatgaag aacgtggaga tggaggaagt 1560
ggaggagaaa cttcagaaga tggagatgga aacggcagca ccagcagtaa aggagagaaa 1620
aggaaaagag aagaaaatga agggaatgaa tatgtagtcc ttttgaacaa ggcttgtaaa 1680
gacataaaag tttgctaa                                     1698

```

<210> 21  
 <211> 563  
 <212> PRT  
 <213> SHRIMP

<400> 21

Met	Ala	Arg	Ser	Val	Gly	Leu	Leu	Ser	Val	Thr	Pro	Glu	Tyr	Asp	Thr
1				5					10					15	
Phe	Lys	Tyr	Ile	Lys	Met	Glu	Glu	Phe	Lys	Thr	Leu	Lys	Val	Lys	Asn
			20					25					30		
Gly	Phe	Thr	Ile	Ser	Gly	Glu	Asn	Pro	Asp	Lys	Tyr	Glu	His	Ile	Leu
		35					40					45			
Leu	Ser	Phe	Lys	Ser	Val	Asp	Arg	Val	Thr	Lys	Ser	Glu	Leu	Arg	Asp
50						55					60				
Gly	Ile	Val	Arg	Leu	Lys	Asp	Lys	Glu	Val	Leu	His	Ile	Lys	Asn	Gly
65					70				75					80	
Val	His	Arg	Leu	Arg	Gln	Leu	Thr	Gly	Asp	Asn	Thr	Leu	Gln	Val	Gly
				85				90					95		
Leu	Lys	Tyr	Thr	His	Asn	Leu	Pro	Arg	Leu	Gly	Ser	Leu	Leu	Gln	Asp
			100					105					110		
Asp	Gly	Cys	Glu	Asp	Tyr	Gly	Glu	Lys	Trp	Asn	Glu	Ser	Leu	Pro	Ile
		115					120				125				
Asp	Met	Gln	Asn	Ile	Asn	Lys	Ile	Val	Lys	Glu	Lys	Ala	Leu	Leu	Ser
130						135					140				
Asp	Lys	Asn	Phe	Lys	Phe	Ser	Pro	Leu	Tyr	Arg	Leu	Leu	His	Glu	Arg
145					150				155					160	
Leu	Ser	Asn	Ala	Ala	Val	Lys	Lys	Cys	Asp	Tyr	Met	Ile	Ile	Thr	Thr
			165						170					175	
Asp	Phe	Leu	Val	Gly	Cys	Gly	Tyr	Thr	Pro	Ser	His	Cys	Pro	Arg	Thr
		180						185					190		
Leu	Arg	Asn	Met	Glu	Gln	Leu	Leu	Val	Glu	Gln	Cys	Gly	Phe	Ser	Ser
195						200						205			
Arg	Ile	Ser	Val	Tyr	Asp	Ile	Cys	Asp	Arg	Leu	Thr	Tyr	Lys	Gly	Ala
210						215					220				
Tyr	Ile	Ala	Asn	Pro	Ile	Thr	Gly	Ser	Tyr	Ser	Asn	Met	Cys	Leu	Ile
225					230				235					240	
Val	Pro	Met	Asp	Lys	Leu	Gly	Leu	Ile	Phe	Tyr	Asn	Ser	Thr	His	Pro
			245						250					255	
Ser	Ala	Lys	Ser	Ile	Gly	Asn	Tyr	Met	Ser	Ser	Leu	Phe	Asn	Ala	Thr
			260					265					270		
Val	Ile	Tyr	Ala	Asn	Glu	Arg	Asp	Asn	Leu	Gln	Met	Asp	Asn	Phe	Arg
		275					280					285			
Arg	Glu	Ile	Lys	Phe	Ala	Glu	Asn	Glu	Val	Asn	Met	Lys	Glu	Glu	Glu
					295						300				
Leu	Lys	Glu	Leu	Arg	Lys	Arg	Cys	Ala	Val	Ser	Glu	Glu	Gln	Arg	Ile
305					310					315				320	
Ser	Leu	Arg	Asp	Val	His	Lys	Lys	Ser	Ser	Ile	Ala	Thr	Ser	Arg	Tyr
			325					330						335	

Asp Gly Gly Ala Cys Leu Val Phe Ala Phe Ser Asp Arg Asp Phe Ser  
 340 345 350  
 Leu Leu Cys Arg Thr Asn Gly Asn Gly Ser Phe Tyr Ser Ala Thr Glu  
 355 360 365  
 Glu Gly Ile Arg Tyr Val Ser Ser Pro Glu Tyr Lys Lys Arg Asp Val  
 370 375 380  
 Gly Glu Arg Arg Pro Arg Leu Ile Met Ser Ile Thr Gly Ser Asp Ala  
 385 390 395 400  
 Pro Ile Cys Ile Arg Asp Ser Val Arg Asn His Phe Lys Thr Arg Leu  
 405 410 415  
 Phe Ser Arg Thr Ser Gly Asn Ser Ile Thr Phe Ala Val Pro Pro Gly  
 420 425 430  
 Glu Arg Glu Leu Met Glu Met Val Arg Glu Val Thr Gly Thr Asp Ile  
 435 440 445  
 Lys Ile Phe Met Asp Asn Gly Lys Val Tyr Gln Asn Gly Ala Glu Ile  
 450 455 460  
 Asn Val Ile Asp Pro Thr Ser Lys Glu Tyr Lys Glu Leu Leu Lys Arg  
 465 470 475 480  
 Glu Glu Asn Leu Pro Glu Asp Glu Arg Lys Arg Leu Arg Arg Glu Arg  
 485 490 495  
 Arg Met Ile Phe Asn Thr Ser Arg Ala Ile Ser Met Tyr Asn Glu Glu  
 500 505 510  
 Arg Gly Asp Gly Gly Ser Gly Gly Glu Thr Ser Glu Asp Gly Asp Gly  
 515 520 525  
 Asn Gly Ser Thr Ser Ser Lys Gly Glu Lys Arg Lys Arg Glu Glu Asn  
 530 535 540  
 Glu Gly Asn Glu Tyr Val Val Leu Leu Asn Lys Ala Cys Lys Asp Ile  
 545 550 555 560  
 Lys Val Cys

<210> 22  
 <211> 630  
 <212> DNA  
 <213> SHRIMP

<400> 22  
 atgattgtat tgcgcgaagg atctccccta actgggaaaa cttcatgggt ggataacatg 60  
 agaactgccg gaaagggcaa acagtccttc ctcaacttca tgtacaccaa ttataggac 120  
 tatttaccca tcttcccatg gaccattcaa gagcatttgc gtgcatccga ttaccaggaa 180  
 cgtcccaggc tctgtgatgg aatgttttga tcatcattga actttttcac aggcattgtg 240  
 aggcacgaca cagaacagtt tccagaatca aaaattggat tgaggaggta tttggagatg 300  
 tatggagaag aattcaaagc atgtgtcgcc gagtgggtca aatacaagcc agttttccat 360  
 gtgatggttt acagggaaga agatgtcaag aaaatggaac caattattca agaattgaat 420  
 gatgcacata actggtttat tgacgttctc aaggaggaga gagcgttgtt tgtaaagatt 480  
 gaagttatcc ccagaaatgt gtacaaaggg aatatttgta gttcatgtt ctcgacgagt 540  
 aagaattacg tgtaccgtgt tggtaaattgc acgaatagta ttgtacactg tgatatgaaa 600  
 tgtaagttta ttgctgagaa gattatttga 630

<210> 23  
 <211> 209  
 <212> PRT  
 <213> SHRIMP

<400> 23  
 Met Ile Val Phe Val Glu Gly Ser Pro Leu Thr Gly Lys Thr Ser Trp  
 1 5 10 15  
 Val Asp Asn Met Arg Thr Ala Gly Lys Gly Lys Gln Ser Phe Leu Asn  
 20 25 30  
 Phe Met Tyr Thr Asn Tyr Arg Asp Tyr Leu Pro Ile Phe Pro Trp Thr

<400> 25

WO 01/38351

105

PCT/US00/28888

Met	Gly	Gly	Glu	Asp	Ser	Phe	Asp	Asp	Arg	Tyr	Asp	Ser	Asp	Ala	Leu
1				5					10					15	
Trp	Glu	Asn	Glu	Gly	Ala	Lys	Ser	Ile	Gln	Val	Lys	Glu	Thr	Asp	Leu
			20					25					30		
Glu	Val	Tyr	Arg	Met	His	Arg	Arg	Ala	Val	Pro	Thr	Leu	Glu	Glu	Lys
		35					40					45			
Asn	Arg	Thr	Ala	Leu	Arg	Tyr	Ser	Asp	Trp	Ser	Pro	Val	Tyr	Arg	
	50					55				60					
Val	Pro	Leu	Phe	Ser	Leu	Lys	Asp	Gly	Ser	Asp	Phe	Arg	Asp	Phe	Ser
65					70					75					80
Phe	Asn	Val	Asp	Pro	Arg	Arg	Phe	Gly	Lys	Val	Pro	Val	Lys	Val	Arg
				85					90					95	
Arg	Val	Asp	Val	Arg	Asn	Pro	Ser	Arg	Thr	Ala	Ala	Ile	Phe	Val	Pro
			100					105					110		
Thr	Gly	Pro	Gly	Leu	His	Val	Ser	Ser	Tyr	Thr	Gly	Asp	Gly	Met	Leu
		115					120					125			
Val	Cys	Pro	Asn	His	Asn	Phe	Ile	Gly	Asp	Leu	Cys	Ser	Glu	Ile	Ala
	130					135					140				
Ser	Asp	Ile	Thr	Ile	Tyr	Asn	Thr	Ser	Ser	Ser	Gly	Arg	Leu	Ser	Tyr
145					150					155					160
Ala	Thr	Asn	Phe	Asn	Ser	Val	Glu	Asp	Asn	Ser	Pro	Val	Gly	Ile	Leu
				165					170					175	
Phe	Glu	Thr	Leu	Pro	Asp	Asp	Lys	Met	Phe	Gln	Gln	Val	Ser	Ile	Phe
			180					185					190		
Ser	Ala	Thr	Glu	Pro	Asn	Ile	Ser	Ile	Gly	Pro	Met	Ser	His	Val	Lys
		195					200					205			
Ile	Lys	Leu	Gly	Tyr	Tyr	Asp	Glu	Glu	Asn	Ala	Thr	Ala	Val	Gly	Val
	210					215					220				
Ile	Arg	Tyr	Gly	Gly	Leu	Phe	Tyr	Thr	Ser	Val	Gly	Ala	Cys	Ile	Ile
225					230					235					240
Pro	Glu	Gly	Val	Phe	Asp	Asp	Val	Val	Gly	Asn	His	Ser	Ser	Met	
				245					250					255	
Asn	Ile	Tyr	Asn	Met	Thr	Asn	Gln	Pro	Lys	Glu	Ile	Val	Leu	Lys	Glu
			260					265					270		
Pro	Arg	Gly	Glu	Asp	Ala	Met	Glu	Glu	Asp	Asp	Gly	Glu	Glu	Ala	Asp
		275					280					285			
Tyr	Asn	Phe	Leu	Gly	Tyr	Val	Val	Arg	Phe	Glu	His	Asp	Leu	Lys	Met
	290					295					300				
Gln	Ala	Met	Ser	Ser	Ala	Tyr	Ser	Ser	Val	Ser	Ile	Asp	Ile	Asn	Ser
305					310					315					320
Ser	Ser	Phe	His	Lys	Cys	Phe	Leu	Ile	Lys	Pro	Lys	Tyr	Asn	Ser	Ile
				325					330					335	
Leu	Gln	Pro	Leu	Val	Ser	Ser	Glu	Val	Val	Leu	Asn	Asp	Leu	Ser	Leu
			340					345					350		
Asn	Thr	Arg	Gly	Arg	Glu	Val	Glu	Phe	His	Asp	Arg	Leu	Pro	Ser	Gly
		355					360					365			
Ala	Gln	Asp	Asn	Ser	Tyr	Ser	Ile	Val	Lys	Tyr	Met	Lys	Ile	Val	Ser
	370					375					380				
Leu	Lys	Glu	Gly	Leu	Lys	Val	Val	Asn	Pro	Ile	Ile	Asn	Thr	Glu	Leu
385					390					395					400
Tyr	Lys	Lys	Lys	Gln	Ala	Leu	Lys	Val	His	Val	Leu	Asn	Met	Thr	Arg
				405					410					415	
Asp	Val	Val	Gly	Leu	Asp	Thr	Ser	Glu	His	Ser	Phe	Gly	Val	Ile	Val
			420					425					430		
Cys	His	Ala	Ala	Lys	Leu	Pro	Glu	Val	Ile	Gly	Gln				
		435					440								

&lt;210&gt; 26

&lt;211&gt; 2352

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 26

```

atggcagcag cagcagtcctc aggagagggg agaatctctg cagatctact cctgttggaa 60
caactcaccc cggacggaga cgtgataaga tacgactctg agcagtacac caaacctagg 120
aagatctttg gtgacaaaag tgtgatagag actattggac attttctcat ccacaaccac 180
aaccaaggtg agagttacca aatcgcatct tctgtgttgg aaaaattccc cgctctactc 240
aattgcatat ggaatggaga gtcgggagga atggctctat ggaaggcatt gtacagggct 300
aaaaagtata gacttctcaa ctcacttttg gtccacaaga taaaaaattg gccttcgggt 360
gccgtgatcc ctatctacgg gtcagtgtgt gacagagaag aaaggcccat catcatgagt 420
gagattattg acaaggaaac tcttcagacc atatgtaaga gtgatatacg ttctcttctt 480
ggaatgatga acgccaagca tggcacattg ggaggtaatt ttttacactt ctatgcccgc 540
tcaactaaac cgtttgaaaa tttccaatat gaagcaatgg gagctaattg agtgctaattg 600
gcagctgaag ctatttatga tggattcaga gaccatggct taaacccatc agaataact 660
tttcttggtt tggaaatctgc tgatgtgtac ggaaacaatc cagtggaaat tgcaatatca 720
ggagatgatg acaatatgtt gttgaacctc atctgcaact atgggtgtatc ttatgaaaaa 780
actcgcggtc gggtaaatag atccttggtt gattttttta aaatgaacac agcttcaaag 840
tgtctcagtg ttttaaagtt tgttgaaaaa cactttaaaa ttgagtcaaa tacaccaaaa 900
ggagaatttg aagaaaaggc cgaaacatgt gttaatgtgc ttgatagaaa taatgtgttg 960
aagaaaggtt ctgaacaaga atcttacaag ctttcttggt gacactttct tcatgtaaaa 1020
tgtttgagga atatttgtat agtatcacia cacctaagat gtgaaaaatg tctaaaaaga 1080
tttgatgaga gtattttgag aaagtgtaca cctaacttga attggtggtt gactatgccg 1140
gcaggtgctg gaaatgaaga agaaatatgt tcatgagaa ataagaaact ggttgatgat 1200
ttcagaaaaa tgttgcctcc ctctcaatt cctcatttct tcaaaaatag tagacagcga 1260
aatcttgata tgttgcctcc ctacagtgc cacacgataa taccataaa agaagatcca 1320
aagaaaaacg aagatggaaa cagagtggag gtcaaccaca cagccatcag tgaaaagcag 1380
aacaaggagg aagaagacgc gaggataaag cgtgtagccg tcaggacatt tacagccatc 1440
agagaaaagc agaacaagga ggaagaagac gcgaggatca agcgtgcagt cgacatggct 1500
gtcgagccca tcaacgaaaa gaacaaggag gaagaagacg cgaggatcaa gcgtgcagtc 1560
gacatggctg tcgcagccat caacgaaaaa aacaaggagg aagaagacgc gaggatcaag 1620
cgtgcagtcg acatggcggt tgcagccatc aacgaaaaa acaaggagga agaagacgcg 1680
aggatcaagc gtgcagtcga catggctgtc gcagccatca acgaaaataa caaggaggaa 1740
gaagacgcga ggatcaagcg tgcagtcgac atggcggttg cagccatcaa cgaaaataac 1800
aaggaggaag aagacgcgag gatcaagcgt gcagtcgaca tggcggttgc agccaccaac 1860
gaaaagaaca agaaggaaga agacgcgagg atcaagcgt taattgactt gactgttgat 1920
atgaggattc aacgtatagt cgacatggca attgcagctg ccactaaaaa ggacaagaaa 1980
gaagaagaga aaaggacaaa aagggaacaa gagttaaggg ctgatctgag aagggcaatg 2040
gatattgtga acgaagtaca gaagaaactt gaagacatgg aactagaaaa ggggtgtaat 2100
aaggatgaag ccaagaatac tagtaatgtt gttagtagca gtagtgttgt tgccatttct 2160
aaagaaattg taccttgttt aggaaataat aataatgctg tcattggtat gactagcacc 2220
aactattctg ccaacaatac taagaataat gtatttggtt cacctcataa attttcttc 2280
aacgatgcat ctgattcttc caatattgta gaaactccca aatgtctttt caatttctcg 2340
ttcaagacat aa 2352

```

&lt;210&gt; 27

&lt;211&gt; 781

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 27

```

Met Ala Ala Ala Ala Val Ser Gly Glu Gly Arg Ile Ser Ala Asp Leu
  1           5           10          15
Leu Leu Leu Glu Gln Leu Thr Pro Asp Gly Asp Val Ile Arg Tyr Asp
          20          25          30
Ser Glu Gln Tyr Thr Lys Pro Arg Lys Ile Phe Gly Asp Lys Ser Val
          35          40          45
Ile Glu Thr Ile Gly His Phe Leu Ile His Asn His Asn Gln Gly Glu
          50          55          60
Ser Tyr Gln Ile Ala Ser Ser Val Leu Glu Lys Phe Pro Ala Leu Leu
          65          70          75          80
Asn Cys Ile Trp Asn Gly Glu Ser Gly Gly Met Ala Leu Trp Lys Ala

```

**PCT/US00/28888**

85								90				95			
Leu	Tyr	Arg	Ala	Lys	Lys	Tyr	Arg	Leu	Leu	Asn	Ser	Leu	Leu	Val	His
			100				105						110		
Lys	Ile	Lys	Asn	Trp	Pro	Ser	Val	Ala	Val	Ile	Pro	Ile	Tyr	Gly	Ser
			115				120						125		
Val	Cys	Asp	Arg	Glu	Glu	Arg	Pro	Ile	Ile	Met	Ser	Glu	Ile	Ile	Asp
			130				135						140		
Lys	Glu	Thr	Leu	Gln	Thr	Ile	Cys	Lys	Ser	Asp	Ile	Arg	Ser	Leu	Leu
145				150			155						160		
Gly	Met	Met	Asn	Ala	Lys	His	Gly	Thr	Leu	Gly	Gly	Asn	Phe	Leu	His
			165				170						175		
Phe	Tyr	Ala	Arg	Ser	Thr	Lys	Pro	Phe	Glu	Asn	Phe	Gln	Tyr	Glu	Ala
			180				185						190		
Met	Gly	Ala	Asn	Ala	Val	Leu	Met	Ala	Ala	Glu	Ala	Ile	Tyr	Asp	Gly
			195				200						205		
Phe	Arg	Asp	His	Gln	Pro	Ser	Glu	Tyr	Thr	Phe	Pro	Gly	Leu	Glu	Ser
			210				215						220		
Ala	Asp	Val	Tyr	Gly	Asn	Asn	Pro	Val	Glu	Ile	Ala	Ile	Ser	Gly	Asp
225				230			235						240		
Asp	Asp	Asn	Met	Leu	Leu	Asn	Leu	Ile	Cys	Asn	Tyr	Gly	Val	Ser	Tyr
			245				250						255		
Glu	Lys	Thr	Arg	Gly	Arg	Val	Asn	Arg	Ser	Leu	Leu	Asp	Phe	Leu	Lys
			260				265						270		
Met	Asn	Thr	Ala	Ser	Lys	Cys	Leu	Ser	Val	Leu	Lys	Phe	Val	Glu	Lys
			275				280						285		
His	Phe	Lys	Ile	Glu	Ser	Asn	Thr	Pro	Lys	Gly	Glu	Phe	Glu	Glu	Lys
			290				295						300		
Ala	Glu	Thr	Cys	Val	Asn	Cys	Leu	Asp	Arg	Asn	Asn	Val	Leu	Thr	Lys
305				310			315						320		
Gly	Ser	Glu	Gln	Glu	Ser	Tyr	Lys	Leu	Ser	Cys	Gly	His	Phe	Leu	His
			325				330						335		
Val	Lys	Cys	Leu	Arg	Asn	Ile	Cys	Ile	Val	Ser	Gln	His	Leu	Arg	Cys
			340				345						350		
Glu	Lys	Cys	Leu	Lys	Arg	Phe	Asp	Glu	Ser	Ile	Leu	Arg	Lys	Cys	Thr
			355				360						365		
Pro	Asn	Leu	Asn	Trp	Trp	Leu	Thr	Met	Pro	Ala	Gly	Ala	Gly	Asn	Glu
			370				375						380		
Glu	Glu	Ile	Cys	Phe	Met	Arg	Asn	Lys	Lys	Leu	Val	Asp	Asp	Phe	Arg
385				390			395						400		
Lys	Leu	Leu	Ser	Pro	Val	Ser	Ile	Pro	His	Phe	Phe	Lys	Asn	Ser	Arg
			405				410						415		
Gln	Arg	Asn	Leu	Asp	Met	Leu	Cys	Pro	Tyr	Ser	Asp	His	Thr	Ile	Ile
			420				425						430		
Pro	Asn	Lys	Glu	Asp	Pro	Lys	Lys	Asn	Glu	Asp	Gly	Asn	Arg	Val	Arg
			435				440						445		
Val	Asn	His	Thr	Ala	Ile	Ser	Glu	Lys	Gln	Asn	Lys	Glu	Glu	Glu	Asp
			450				455						460		
Ala	Arg	Ile	Lys	Arg	Val	Ala	Val	Arg	Thr	Phe	Thr	Ala	Ile	Arg	Glu
465				470			475						480		
Lys	Gln	Asn	Lys	Glu	Glu	Glu	Asp	Ala	Arg	Ile	Lys	Arg	Ala	Val	Asp
			485				490						495		
Met	Ala	Val	Ala	Ala	Ile	Asn	Glu								

Glu Glu Glu Asp Ala Arg Ile Lys Arg Ala Val Asp Met Ala Val Ala  
 580 585 590  
 Ala Ile Asn Glu Asn Asn Lys Glu Glu Glu Asp Ala Arg Ile Lys Arg  
 595 600 605  
 Ala Val Asp Met Ala Val Ala Ala Thr Asn Glu Lys Asn Lys Lys Glu  
 610 615 620  
 Glu Asp Ala Arg Ile Lys Arg Ile Ile Asp Leu Thr Val Asp Met Arg  
 625 630 635 640  
 Ile Gln Arg Ile Val Asp Met Ala Ile Ala Ala Ala Thr Lys Lys Asp  
 645 650 655  
 Lys Lys Glu Glu Glu Lys Arg Thr Lys Arg Glu Gln Glu Leu Arg Ala  
 660 665 670  
 Asp Leu Arg Arg Ala Met Asp Met Val Asn Glu Val Gln Lys Lys Leu  
 675 680 685  
 Glu Asp Met Glu Leu Glu Lys Gly Cys Asn Lys Asp Glu Ala Lys Asn  
 690 695 700  
 Thr Ser Asn Val Val Ser Ser Ser Ser Val Val Ala Tyr Ser Lys Glu  
 705 710 715 720  
 Ile Val Pro Cys Leu Gly Asn Asn Asn Asn Ala Val Ile Gly Met Thr  
 725 730 735  
 Ser Thr Asn Tyr Ser Ala Asn Asn Thr Lys Asn Asn Val Phe Gly Ser  
 740 745 750  
 Pro His Lys Phe Ser Phe Asn Asp Ala Ser Arg Phe Ser Asn Ile Val  
 755 760 765  
 Glu Thr Pro Lys Met Ser Phe Asn Phe Ser Phe Lys Thr  
 770 775 780

&lt;210&gt; 28

&lt;211&gt; 1506

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 28

atggtatata aaggctttgt atctccatca tttatcacta ttcgtacgat gacgtccaac 60  
 agaccaacaa catcccctct ttcgtttctct gaaggcttct cgctttcagg ggataagtat 120  
 gatcagtgat aggatattct acttgaacaa ttcaactgtt tcaagacatc ttctccttct 180  
 tctgctcgta aaagtgaat agaggataaa actttaatct ttcaacttaa agaaggagaa 240  
 aaattccatc ttgcaaggag catagaagag ctccgtgaga ttctagacga taattctgca 300  
 acaattgaac ctattatttc tccaacgaca ttcaatgaca gaaacgaatt actaaaccac 360  
 gagggagata tatcctcaag tcccctatat actcagataa tgaagcatat ttcaccagag 420  
 catgatattt atgaattgga ccttattggt ggcactgatt tgcttttttg tctaggtgtg 480  
 aatctacgca acgtttctaa actgatgaag aaaatatcgt atggtaactt aaatgtagtt 540  
 gatgtgtgcc acagaaaatt tttcaacaat aggattatag ttaatcccat ttcttcgtca 600  
 ttctcaaaaa atgtgtgtat tattcctcta ttttctgcag ctgaagaatt ttcgtctctg 660  
 ggggaatgca gggatttatt caacggtatt tgtgatgacg tagagagata tatcaactct 720  
 tattttttct accctgaaaa tactactact actactacta ctgctccttc gtcgcccga 780  
 atggaaattg cagatgagga agaacaatcc ccaaaaacta taaagagaaa tgacaacgca 840  
 agtagaaact ggtctggtgt ctggttgatt tttgaagtat ttaaaaacac gtactacatt 900  
 attaatagag gagatagagg aggttctttt gaaaaggctg tgaagagtgc aatttcttct 960  
 atcaaggaaa agagatgtaa aatcacagat attaatggta ataaacctcg attggttatg 1020  
 gtgataactg ggtgttatat agaattgtac ttcaaagatg cacttaaaca gattggagaa 1080  
 aacaggcgca aatttttgaa aatgaatggg aattactttt ctctgattga tgaacaagca 1140  
 gatctaactg aattcgcgat gagtgtttct ggtgccgggg agaggatttt tggttaacgg 1200  
 ttggggatgt tccagaaccg taaaatgata cctgtaattg atcctctcac atatgaaaa 1260  
 gttgtatgtg gtgagcatga tatacaaaaa gaagatgcta ttctttctgt aaggagagct 1320  
 attgcagact ataatgactt tgtaagtaag aacaagagag ggaagaaacg cagcgagaa 1380  
 gaagaaaatg aagatgaaga tgcagacgct agcagcagca gcagcagcag tcctcctcct 1440  
 tcttctcctc ctgcacataa aaaatcacgt cttccggatg aaggcgaaaa atgtacactc 1500  
 tggttaa 1506



<210> 29  
 <211> 499  
 <212> PRT  
 <213> SHRIMP

<400> 29

Met	Val	Tyr	Lys	Gly	Phe	Val	Ser	Pro	Ser	Phe	Ile	Thr	Ile	Arg	Thr
1				5					10					15	
Met	Thr	Ser	Asn	Arg	Pro	Thr	Thr	Ser	Pro	Leu	Ser	Phe	Ser	Glu	Gly
			20					25					30		
Phe	Ser	Leu	Ser	Gly	Asp	Lys	Tyr	Asp	Thr	Tyr	Glu	Asp	Ile	Leu	Leu
		35					40					45			
Glu	Gln	Phe	Asn	Cys	Phe	Lys	Thr	Ser	Ser	Pro	Ser	Ser	Ala	Arg	Lys
	50					55					60				
Ser	Glu	Ile	Glu	Asp	Lys	Thr	Leu	Ile	Phe	Gln	Leu	Lys	Glu	Gly	Glu
65					70					75					80
Lys	Phe	His	Leu	Ala	Lys	Gly	Ile	Glu	Glu	Leu	Arg	Glu	Ile	Leu	Asp
				85					90					95	
Asp	Asn	Ser	Ala	Thr	Ile	Glu	Pro	Ile	Ile	Ser	Pro	Thr	Thr	Phe	Asn
			100					105					110		
Asp	Arg	Asn	Glu	Leu	Leu	Asn	His	Glu	Gly	Asp	Ile	Ser	Ser	Ser	Pro
		115					120					125			
Leu	Tyr	Thr	Gln	Ile	Met	Lys	His	Pro	Glu	His	Asp	Ile	Tyr	Glu	Leu
	130					135					140				
Asp	Leu	Ile	Val	Gly	Thr	Asp	Leu	Leu	Phe	Gly	Leu	Gly	Val	Asn	Leu
145					150					155					160
Arg	Asn	Val	Ser	Lys	Leu	Met	Lys	Lys	Ile	Ser	Tyr	Gly	Thr	Leu	Asn
				165					170					175	
Val	Val	Asp	Val	Cys	His	Arg	Lys	Phe	Phe	Asn	Asn	Arg	Ile	Ile	Val
			180					185					190		
Asn	Pro	Ile	Ser	Ser	Ser	Phe	Ser	Lys	Asn	Val	Cys	Ile	Ile	Pro	Leu
		195					200					205			
Phe	Ser	Ala	Ala	Glu	Glu	Phe	Ser	Ser	Leu	Gly	Glu	Cys	Arg	Asp	Leu
		210				215					220				
Phe	Asn	Gly	Ile	Cys	Asp	Asp	Val	Glu	Arg	Tyr	Ile	Asn	Ser	Tyr	Phe
225					230					235					240
Phe	Tyr	Pro	Glu	Asn	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Ala	Pro	Ser	Ser
				245						250				255	
Pro	Glu	Met	Glu	Ile	Ala	Asp	Glu	Glu	Glu	Gln	Ser	Pro	Lys	Thr	Ile
			260					265					270		
Lys	Arg	Asn	Asp	Asn	Ala	Ser	Arg	Asn	Trp	Ser	Gly	Val	Cys	Leu	Ile
		275					280					285			
Phe	Glu	Val	Phe	Lys	Asn	Thr	Tyr	Tyr	Ile	Ile	Asn	Arg	Gly	Asp	Arg
	290					295					300				
Gly	Gly	Ser	Phe	Glu	Lys	Ala	Val	Lys	Ser	Ala	Ile	Ser	Ser	Ile	Lys
305					310					315					320
Glu	Lys	Arg	Cys	Lys	Ile	Thr	Asp	Ile	Asn	Gly	Asn	Lys	Pro	Arg	Leu
				325					330					335	
Val	Met	Val	Ile	Thr	Gly	Cys	Tyr	Thr	Glu	Leu	Tyr	Phe	Lys	Asp	Ala
			340					345					350		
Leu	Lys	Gln	Ile	Gly	Glu	Asn	Arg	Arg	Lys	Phe	Leu	Lys	Met	Asn	Gly
		355				360						365			
Asn	Tyr	Phe	Ser	Leu	Ile	Asp	Glu	Gln	Ala	Asp	Leu	Ile	Glu	Phe	Ala
	370					375					380				
Met	Ser	Val	Ser	Gly	Ala	Gly	Glu	Arg	Ile	Phe	Val	Asn	Gly	Leu	Gly
385					390					395					400
Met	Phe	Gln	Asn	Arg	Lys	Met	Ile	Pro	Val	Ile	Asp	Pro	Leu	Thr	Tyr
				405					410					415	
Glu	Asn	Val	Val	Cys	Gly	Glu	His	Asp	Ile	Gln	Lys	Glu	Asp	Ala	Ile
			420					425					430		
Leu	Ser	Val	Arg	Arg	Ala	Ile	Ala	Asp	Tyr	Asn	Asp	Phe	Val	Ser	Lys

<400>	31														
Met	Ala	Val	Asn	Leu	Asp	Asn	Val	Leu	Val	Asn	Ile	Asn	Asn	Lys	Asp
1				5					10					15	
Glu	Asp	Leu	Thr	Lys	Leu	Val	Ser	Glu	Ala	Ile	Lys	Arg	Arg	Ala	Lys
			20					25					30		
Thr	Val	Phe	Asp	Thr	Lys	Asn	Gln	Ala	Gly	Phe	Asp	Met	Arg	Arg	Gln
		35					40					45			
Val	Glu	Ala	Ala	Leu	Tyr	Glu	Ala	Ile	Ser	Lys	Lys	Lys	Glu	Lys	Ala
	50					55					60				
Ile	Lys	Ala	Phe	Asp	Glu	Leu	Ile	Gln	Glu	Arg	Gly	Asp	Glu	Ile	Thr
65					70					75					80
Pro	Leu	Thr	Thr	Met	Gln	Tyr	Glu	Glu	Trp	Val	Asn	Arg	Thr	Ile	Thr
				85					90					95	
Pro	Ser	Leu	Thr	Thr	Glu	Asn	Leu	Leu	Gly	Asp	Val	Glu	His	Ala	Asp
			100					105					110		
Phe	Leu	Leu	Asp	Arg	Met	Thr	Pro	Val	Ser	Glu	Glu	Asp	Ile	Glu	Gly
		115					120					125			
Phe	Ala	Ala	Ser	Thr	Phe	Lys	Glu	Val	Ser	Asp	Ser	Lys	Thr	Ala	Thr

130	135	140
Val Ile Val Lys Ala Asp Cys Glu Thr Gly Asp Ile Asp Glu Val Tyr		
145	150	155
Asn Leu Ala Pro Ser Phe Gly Val Thr Gln Glu Ile Lys Ile Tyr Arg		160
	165	170
Ser Asn Asn Ser Ser Glu Leu Asp Asn Val Ala Asp Ser Phe His Ile		175
	180	185
Tyr Lys Ile Ser Ala Thr Asp Ser Asp Ser Gly Asn Thr Lys Lys Leu		190
	195	200
Leu Tyr Gly Leu Arg Asn Lys Lys Ala Gly Tyr Thr Cys Leu Cys Arg		205
	210	215
Ile Phe Ala Glu Ile Glu Ser Asp Gly Ile Met Ala Asn Thr Asn Ile		220
225	230	235
Gly Val Ala Glu Asn Asn Arg Asp Glu Ile Asp Glu Asn Glu Glu Gly		240
	245	250
Lys Tyr Gly Phe Leu Ile Pro Lys Gln Pro Ala Gly Ala Lys Leu Ile		255
	260	265
Ile Tyr Phe Phe Leu Asn Cys Trp Thr Xaa		270
	275	280

<210> 32  
 <211> 1089  
 <212> DNA  
 <213> SHRIMP

<400> 32  
 atgactgtat tagctgtata cactgcacct caaataaaga aatcgaagaa gagaaaaatt 60  
 gaagatgaaa atgaggaaga acccgtaaag acttttgaag attttgtaaa gggtcggctc 120  
 cttaacgctg tcaaggaaaa acctgcagag tactttgagt tgctaataatc tgcagacact 180  
 gaagcagcat taaaaactgc cgaagaaaca gcccttcgag attttgttat tgagaacgac 240  
 tctgtcgaaa tagatgtgga ggaagtactt gaagagaaac caagagaata tgtcttcaaa 300  
 ttggcaggcg caacaagcga aacgctaaca aacacaatca tcgcagaggt acaaaaaaag 360  
 gcagcattaa taacagaaga agatatcact attaaaatgt taaaacaatt cagggtcgcg 420  
 aacaaagata ataaagacgg ggaagcaact cctgaagaaa aggaagattt taccaataat 480  
 tcagatcttg tggggttgta cttgaacgaa gtagtagaaa aaacaacaaa tattgtcatt 540  
 aacaaaatat tccctcatga gatggttttt gaaagatgtg ctattttaat tgaagatttt 600  
 gatactggtg ttgtgactga tcaagccatt cagataccct ccaacaaata caaaatcaga 660  
 ttagtcgaag gggatgaacc tgaagtattc cctgggtgact gcttgatct tgagtttca 720  
 gttgataaaa taaaccacgt cttgaaaatt tctgcaaaga acggatgtga aaacaactgc 780  
 ttcgattatta ttccacggtt ctctcctgta ggaagtgttt cttccatgat attgggcagc 840  
 actgaccaag tcaaacctaa aacattctta ttttagcca acaaaaatga cagtacacat 900  
 tttcaattca caatggataa gcaacattct gtaggggtgtg agttggacat gttaattttt 960  
 tcagaaagga acttgaggaa tttaccgat tcaaaaccta gacctctaag tgatgcagac 1020  
 atattggcct catatgggaa gcgtctagga actggtgttt tcacaacaga aaatttggtg 1080  
 gacgattaa 1089

<210> 33  
 <211> 356  
 <212> PRT  
 <213> SHRIMP

<400> 33  
 Met Thr Val Leu Ala Val Tyr Thr Ala Pro Gln Ile Lys Lys Ser Lys  
 1 5 10 15  
 Lys Arg Lys Ile Glu Asp Glu Asn Glu Glu Pro Val Lys Thr Leu  
 20 25 30  
 Glu Asp Phe Val Lys Gly Arg Leu Leu Asn Ala Val Lys Glu Lys Pro  
 35 40 45  
 Ala Glu Tyr Phe Glu Leu Leu Ile Ser Ala Asp Thr Glu Ala Ala Leu  
 50 55 60

Lys Thr Ala Glu Glu Thr Ala Leu Arg Asp Phe Val Ile Glu Asn Asp  
 65 70 75 80  
 Ser Val Glu Ile Asp Val Glu Glu Val Leu Glu Glu Lys Pro Arg Glu  
 85 90 95  
 Tyr Val Phe Lys Leu Ala Gly Ala Thr Ser Glu Thr Leu Thr Asn Thr  
 100 105 110  
 Ile Ile Ala Glu Val Gln Lys Lys Ala Ala Leu Ile Thr Glu Glu Asp  
 115 120 125  
 Ile Thr Ile Lys Met Leu Lys Gln Phe Arg Ala Ala Asn Lys Asp Asn  
 130 135 140  
 Lys Asp Gly Glu Ala Thr Pro Glu Glu Lys Glu Asp Phe Thr Asn Asn  
 145 150 155 160  
 Ser Asp Leu Val Gly Leu Asn Glu Val Val Glu Lys Thr Thr Asn Ile  
 165 170 175  
 Val Ile Asn Lys Ile Phe Phe Met Val Phe Glu Arg Cys Ala Ile Leu  
 180 185 190  
 Ile Glu Asp Phe Asp Thr Gly Val Val Thr Asp Gln Ala Ile Gln Ile  
 195 200 205  
 Pro Ser Asn Lys Tyr Lys Ile Arg Leu Val Glu Gly Asp Glu Pro Glu  
 210 215 220  
 Val Phe Pro Gly Asp Cys Leu Asp Leu Ala Val Ser Val Asp Lys Ile  
 225 230 235 240  
 Asn His Val Leu Lys Ile Ser Ala Lys Asn Gly Cys Glu Asn Asn Cys  
 245 250 255  
 Phe Val Ile Ile Pro Arg Phe Ser Pro Val Gly Ser Val Ser Ser Met  
 260 265 270  
 Ile Leu Gly Ser Thr Asp Gln Val Lys Pro Lys Thr Phe Leu Phe Leu  
 275 280 285  
 Ala Asn Lys Asn Asp Ser Thr His Phe Gln Phe Thr Met Asp Lys Gln  
 290 295 300  
 His Ser Val Gly Cys Glu Leu Asp Met Leu Ile Phe Ser Asn Leu Arg  
 305 310 315 320  
 Asn Leu Pro Asp Ser Lys Pro Arg Pro Leu Ser Asp Ala Asp Ile Leu  
 325 330 335  
 Ala Ser Tyr Gly Lys Arg Leu Gly Thr Gly Val Phe Thr Thr Glu Asn  
 340 345 350  
 Leu Val Asp Asp  
 355

<210> 34  
 <211> 930  
 <212> DNA  
 <213> SHRIMP

<400> 34  
 atgtcttctt cgtcttctga aactcctaag acttccaccg atactgggga agaaaggatt 60  
 aaagacattg taaatgctct agataataat ggcgagtggg tgtcttccta tattgatccg 120  
 attatcaata atcacatctc acgaaaaacg gcagaaactg tccaaaaaat caaccaagaa 180  
 gttgatgaac ggtacgatag aaaaatagcc gacaaaatca acgaaataaa atcatccatc 240  
 tttaacaagt ctcagactat gtatgaccaa tatgcaatag acacatttca agaaggaaaa 300  
 ggagccaacg ggactggacc agtcatgggg ccagtgaaca cggttatcga tacaacttta 360  
 aataaaatga ggggaaatat gctcgaatac gctgaagata tgtgggacgg agatgactgg 420  
 aaacgatttt ccagttctat gacaacgctt gaatttgatc taagttactc tgatttaact 480  
 atgatgcgtg gttctgacgg gtatttttgc ttccctttcc gtggaacaaa aaagataaag 540  
 atggacgggt caagaaagaa agaagacca attaattgta tcatttcagt aacatatcca 600  
 aacaaagtag gggatgagtg ggaagagggt aaagaacgtg aagtgaattt taacctagaa 660  
 agagtagacg actatgaaag agatatccat gtttcaattt tgtgcatgtt acatgcacaa 720  
 cttgataatt tcgaacaagc attaggagaa aatgcaaact ctttttattt taaaaagggg 780  
 caaagagtca tgttcttacc caagaaatct aaactgttca atagacctac tgtagaagat 840  
 tctgatatgt tttctataat attcccacct gcacttgacc aagattttgc agatgatatt 900

tattatcgaa taattgtaac atgttcataa

930

<210> 35  
 <211> 307  
 <212> PRT  
 <213> SHRIMP

<400> 35  
 Met Ser Ser Ser Ser Ser Glu Thr Pro Lys Thr Ser Thr Asp Thr Gly  
 1 5 10 15  
 Glu Glu Arg Ile Lys Asp Ile Val Asn Ala Leu Asp Asn Asn Gly Glu  
 20 25 30  
 Trp Leu Ser Ser Tyr Ile Asp Pro Ile Ile Asn Asn His Arg Lys Thr  
 35 40 45  
 Ala Glu Thr Val Gln Lys Ile Asn Gln Glu Val Asp Glu Arg Tyr Asp  
 50 55 60  
 Arg Lys Ile Ala Asp Lys Ile Asn Glu Ile Lys Ser Ser Ile Phe Thr  
 65 70 75 80  
 Ser Ala Gln Thr Met Tyr Asp Gln Tyr Ala Ile Asp Thr Phe Gln Glu  
 85 90 95  
 Gly Lys Gly Ala Asn Gly Thr Gly Pro Val Met Gly Pro Val Asn Thr  
 100 105 110  
 Val Ile Asp Thr Thr Leu Asn Lys Met Arg Gly Asn Met Leu Glu Tyr  
 115 120 125  
 Ala Glu Asp Met Trp Asp Gly Asp Asp Trp Lys Arg Phe Ser Ser Ser  
 130 135 140  
 Met Thr Thr Leu Glu Phe Asp Leu Ser Tyr Ser Asp Leu Thr Met Met  
 145 150 155 160  
 Arg Gly Ser Asp Gly Tyr Phe Ala Phe Pro Phe Arg Gly Thr Lys Lys  
 165 170 175  
 Ile Lys Met Asp Gly Ser Arg Lys Lys Glu Asp Pro Ile Asn Cys Ile  
 180 185 190  
 Ile Ser Val Thr Tyr Pro Asn Lys Val Gly Asp Glu Trp Glu Glu Gly  
 195 200 205  
 Lys Glu Arg Glu Val Asn Phe Asn Leu Glu Arg Val Asp Asp Tyr Glu  
 210 215 220  
 Arg Asp Ile His Val Ser Ile Leu Cys Met Leu His Ala Gln Leu Asp  
 225 230 235 240  
 Asn Phe Glu Gln Ala Leu Gly Glu Asn Ala Asn Ser Phe Tyr Phe Lys  
 245 250 255  
 Lys Gly Gln Arg Val Met Phe Leu Pro Lys Lys Ser Lys Leu Phe Asn  
 260 265 270  
 Arg Pro Thr Val Glu Asp Ser Asp Met Phe Ser Ile Ile Phe Pro Pro  
 275 280 285  
 Ala Ser Asp Gln Asp Phe Ala Asp Asp Ile Tyr Tyr Arg Ile Ile Val  
 290 295 300  
 Thr Cys Ser  
 305

<210> 36  
 <211> 3657  
 <212> DNA  
 <213> SHRIMP

<400> 36  
 atggagacaa ctatggataa tgtcgttcag aataacgacg taacaaaacc aacaccagat 60  
 gttgctactg ttacaacagc aactgagaaa cgtcagtcac gcaaagagaa aaaggatcaa 120  
 cttaaggccg aatgtcctca agtactgaga gcactaaaat tgtccaatac tttaaaggca 180  
 aatttttgaa aatccatgct ggctatTTTT gctcaacatt tagtggacat gacaaacgct 240  
 aaacacttta aggacccaaa gacaaagaag attttagaac tggatggaag tagtagcagt 300

gacagtgaag	aagaggaaga	aactagttct	tcatccaaac	ggaaaagagg	tagtggtgct	360
agaagtgcct	cttcaaagaa	agaaaaatgc	cccaatacta	tcaaaaattg	gctcaatgat	420
gctcaagggtg	tattccgcca	gtttgcagat	atcatcatta	atcttccctc	ttttgatgat	480
cttagagacg	aagtaaagga	tgaacaaact	gagctaaaga	ccatatatga	cttgatata	540
caggacatgg	aaaaggtggt	ggaagaagtt	ttagggcgcc	aagacctgtt	tgatcacaag	600
tcagaaatag	ccaaggttt	ggcccggttc	gatacccacg	tctcgttgct	cccttcggat	660
aggtcggctg	ttctagactc	gtccatatcc	aaagagttgg	aaaaaaatag	caaggggccg	720
aacagtaata	tttttgacac	actaaacaca	ctcaagggaag	aaatcaaaga	acttttatgt	780
catcatgtca	aatattttatt	gcaaaatcct	acaccggagg	atgcaaattt	tgtgttcaat	840
agttctgtaa	agtatgtaaa	gaaatcatat	caatactaca	tacaaacatc	agagatggaa	900
agtgatgaat	ttaagtcctt	tctcactgga	gtcaacatta	aaatattgga	gaagataatc	960
tcgtccgata	ataatgttgc	tactccttac	aaacacatca	ctaattccag	gaacattatt	1020
tcgtctttac	aaaaagtacg	tgaaactaaa	cctgtttcaa	aggattatcc	gttcagagt	1080
gatacggcca	gagatattgt	actacttcca	gagacgggtg	gcatttctga	tctccctatc	1140
aagcccggtta	cattattgca	gttggtgtcc	tacatcaacg	ctctcttttc	cctcgagcgc	1200
cgaaatgttt	tcaccgacgg	cttttttaat	gcagcgtgcg	tcctaatttc	ccagtgccta	1260
acgaatgcga	acctattatc	taacgacttt	cctaaaccca	ttgaaactggc	agctaattgt	1320
actcgccata	atcttctgag	tatgaaaatg	cttcaagaag	gttcatccag	tgaaaagaag	1380
agtaaaaaga	aggagaaaaa	gaaggataaa	aagaaggggc	gtggtggtgg	tgacgattct	1440
gattcagaaa	cagattcttc	ctcatcatca	tcactttctt	cttcttcatc	ctcctctctc	1500
tcatccgaag	acgaagaaga	agaaaaagga	gaagcagtag	aaaaaggcaa	gaaaactaaa	1560
cgcaaaacaa	aaaagaaacc	atcaaaggac	gacgatttag	atacaattag	taaactgatt	1620
ctaaaaacag	gaggttactt	ccacgacacg	agtgaactcg	gcaataaaat	tagaaattta	1680
atagacaagg	atgattttgc	gggcgtagcc	caatatgcag	taacaatcac	tgagatgcaa	1740
tctacgcaa	tgaatcaaag	attagtatct	agtcttttag	atttgataat	gagactaaaa	1800
gaacaagttaa	aatatagtgt	tgatactgaa	agtaacttct	ccaccgcaa	atctaataat	1860
gcttttagata	gtgctaaatt	gacatctcaa	caagtgggtta	caatgatggt	ggattctgga	1920
gctgaattgg	caaggctagc	tgccttcttt	ttcgtggtgg	tggataatac	tgtagttaat	1980
cgccatgaag	cattcattct	aacatcaaaa	cttttaccct	cgaatgaaaa	tagaggactt	2040
aaaactgttg	tagagtcatt	ctttaaaaat	ttaacaatta	gtaacaaagt	ctctacctcg	2100
aatgaagaaa	tgatgtcgg	gatgccgttc	gaagacgaac	aacaacaaca	acaatgccct	2160
caacatgaac	aacaaccgga	tttgaaaaga	gtggtgggag	aagtatttct	agaaatggga	2220
aaatcaatag	tgaactcatt	cccttccaat	aagagtgtac	aattaacggc	tgacgcgttc	2280
aagcaaaact	actcgctat	gggaagacgc	ataaatttgg	cggccaagat	aaaaacggct	2340
atatctatcg	gatctaatat	ctcgcccaat	atactatttt	ctaacctccc	agaatctgta	2400
gggaataata	ctgtaactgg	tctaaggcta	accaacctat	tgaaaaacat	atcccaaagt	2460
gcccagctca	ataatataat	caaaaatgcc	aacacgctcg	taacaataac	gatggacca	2520
caaaactcag	cagccatgtc	catactactc	tttcttccaa	catcaaaaaga	aacttctatc	2580
tttcccgga	acgatccttc	atctataaaa	ttacaggata	tgactacaat	gtcaaatctg	2640
gcacgaggat	tttattccat	cgcagaagga	tgtatcgggg	tcgtacgctc	gaggggaattt	2700
gatgaaggag	gagttaaagc	gtacacttta	ctagtggact	caaatactat	ggacatggca	2760
gttaattttg	ccgctcagtc	tctgaaaaaa	tcaatgtctg	aagccttaac	aaataatgcg	2820
aatatgaacc	cttctaattg	attagaagga	ggatcttttg	tagacggtgc	tctttcttac	2880
atgtttgaaa	aaaatggcag	tgactgtgaa	cccaccctc	tagcaaaata	tacaatgaaa	2940
gatgtatcaa	atcgatactt	gaaaaaattc	aacaatgata	aaaatacaca	agatttatat	3000
aaaaatagag	cagaaagagc	actcgtcgaa	caggttacaa	ataagcctac	aagtgttgtg	3060
cattcccagc	tagcaaacgc	catgggggta	gctgttatag	gcgcagcatc	aatcaagctc	3120
atggaagcag	aagcagcgga	atctgaaatg	agagcagcaa	attatcaagc	aacatcaaaa	3180
tctacaaatg	ctattaatat	aacaaatata	attggaatga	tacgtaatac	tactcacctg	3240
tgtacgacca	tcgccgtgag	tgacgcccgc	gacatgtcaa	agctcgccaa	caaccatttt	3300
atgagtgtat	taaacactgc	aaataacagt	catagcagca	gacgaggaga	cagatcgtcc	3360
ctgatgttgc	agcaacaaca	accaacacat	tcagcatttc	tggaaacagac	aagaggaaga	3420
ggaggaggag	tattaggatc	aggaactgaa	cagacaaagg	atcatgtgga	acgtatgaag	3480
agagattgga	tattaaacat	gatattctcca	gaagacaaaa	atactactac	tactacaccc	3540
agtaatgccg	gccggacatt	aggatatgga	tctaataata	ctggcataaa	cacgataaaa	3600
caagacgaca	agagtatgat	ggataaaactt	tctgagatgt	ctagcttcag	aacttaa	3657

&lt;210&gt; 37

&lt;211&gt; 1210

&lt;212&gt; PRT

&lt;213&gt; SHRIMP



465					470					475					480
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
				485					490						495
Glu	Asp	Glu	Glu	Glu	Glu	Lys	Gly	Glu	Ala	Val	Glu	Lys	Gly	Lys	Lys
			500					505					510		
Thr	Lys	Arg	Lys	Thr	Lys	Lys	Lys	Pro	Ser	Lys	Asp	Asp	Asp	Leu	Asp
		515					520					525			
Thr	Ile	Ser	Lys	Leu	Ile	Leu	Lys	Thr	Gly	Gly	Tyr	Phe	His	Asp	Thr
	530					535					540				
Ser	Glu	Leu	Gly	Asn	Lys	Ile	Arg	Asn	Leu	Ile	Asp	Lys	Asp	Asp	Phe
545					550					555					560
Ala	Gly	Val	Ala	Gln	Tyr	Ala	Val	Thr	Ile	Thr	Glu	Met	Gln	Ser	Thr
				565					570					575	
Pro	Met	Asn	Gln	Arg	Leu	Val	Ser	Ser	Leu	Leu	Asp	Leu	Ile	Met	Arg
			580					585					590		
Leu	Lys	Glu	Gln	Val	Lys	Tyr	Ser	Val	Asp	Thr	Glu	Ser	Thr	Ser	Ser
		595					600					605			
Thr	Ala	Lys	Ser	Asn	Asn	Ala	Leu	Asp	Ser	Ala	Lys	Leu	Thr	Ser	Gln
	610					615						620			
Gln	Val	Val	Thr	Met	Met	Val	Asp	Ser	Gly	Ala	Glu	Leu	Ala	Arg	Leu
625					630					635					640
Ala	Ala	Phe	Phe	Phe	Val	Val	Val	Asp	Asn	Thr	Val	Val	Asn	Arg	His
				645					650					655	
Glu	Ala	Phe	Ile	Leu	Thr	Ser	Lys	Leu	Leu	Pro	Ser	Asn	Glu	Asn	Arg
			660					665					670		
Gly	Leu	Lys	Thr	Val	Val	Glu	Ser	Phe	Phe	Lys	Asn	Leu	Thr	Ile	Ser
		675					680					685			
Asn	Lys	Val	Ser	Thr	Ser	Asn	Glu	Glu	Met	Met	Ser	Val	Met	Pro	Phe
	690					695					700				
Glu	Asp	Glu	Gln	Gln	Gln	Gln	Gln	Cys	Pro	Gln	His	Glu	Gln	Gln	Pro
705					710					715					720
Asp	Leu	Lys	Arg	Val	Val	Gly	Glu	Val	Phe	Leu	Glu	Met	Gly	Lys	Ser
				725					730					735	
Ile	Val	Asn	Ser	Phe	Pro	Ser	Asn	Lys	Ser	Val	Gln	Leu	Thr	Ala	Asp
		740						745					750		
Ala	Phe	Lys	Gln	Asn	Tyr	Ser	Pro	Met	Gly	Arg	Arg	Ile	Asn	Leu	Ala
		755					760					765			
Ala	Lys	Ile	Lys	Thr	Ala	Ile	Ser	Ile	Gly	Ser	Asn	Ile	Ser	Pro	Asn
	770					775					780				
Ile	Leu	Phe	Ser	Asn	Leu	Pro	Glu	Ser	Val	Gly	Asn	Asn	Thr	Val	Thr
785					790					795					800
Gly	Leu	Arg	Leu	Thr	Asn	Leu	Leu	Lys	Asn	Ile	Ser	Gln	Ser	Ala	Gln
				805					810					815	
Ala	Asn	Asn	Ile	Ile	Lys	Asn	Ala	Asn	Thr	Leu	Val	Asn	Asn	Thr	Met
			820					825					830		
Asp	Gln	Gln	Asn	Ser	Ala	Ala	Met	Ser	Ile	Leu	Leu	Phe	Pro	Pro	Thr
		835					840					845			
Ser	Lys	Glu	Thr	Ser	Ile	Phe	Pro	Gly	Asn	Asp	Pro	Ser	Ser	Ile	Lys
	850					855					860				
Leu	Gln	Asp	Met	Thr	Thr	Met	Ser	Asn	Leu	Arg	Phe	Tyr	Ser	Ile	Ala
865					870					875					880
Glu	Gly	Cys	Ile	Gly	Val	Val	Arg	Ser	Arg	Glu	Phe	Asp	Glu	Gly	Gly
				885					890					895	
Val	Lys	Ala	Tyr	Thr	Leu	Leu	Val	Asp	Ser	Asn	Thr	Met	Asp	Met	Ala
			900					905					910		
Val	Asn	Phe	Ala	Ala	Gln	Ser	Leu	Glu	Lys	Ser	Met	Ser	Glu	Ala	Leu
		915					920					925			
Thr	Asn	Asn	Ala	Asn	Met	Asn	Pro	Ser	Asn	Val	Leu	Glu	Gly	Gly	Ser
	930					935					940				
Phe	Val	Asp	Gly	Ala	Leu	Ser	Tyr	Met	Phe	Glu	Lys	Asn	Gly	Ser	Asp
945					950					955					960



Cys Glu Pro Thr Pro Leu Ala Lys Tyr Thr Met Lys Asp Val Ser Asn  
 965 970 975  
 Arg Tyr Leu Lys Lys Phe Asn Asn Asp Lys Asn Thr Gln Asp Leu Tyr  
 980 985 990  
 Lys Asn Arg Ala Glu Arg Ala Leu Val Glu Gln Val Thr Asn Lys Pro  
 995 1000 1005  
 Thr Ser Val Val His Ser Gln Leu Ala Asn Ala Met Gly Val Ala Val  
 1010 1015 1020  
 Ile Gly Ala Ala Ser Ile Lys Leu Met Glu Ala Glu Ala Ala Glu Ser  
 1025 1030 1035 1040  
 Glu Met Arg Ala Ala Asn Tyr Gln Ala Thr Ser Lys Ser Thr Asn Ala  
 1045 1050 1055  
 Ile Asn Ile Thr Asn Thr Ile Gly Met Ile Arg Asn Thr Thr His Leu  
 1060 1065 1070  
 Cys Thr Thr Ile Ala Val Ser Ala Ala Ala Asp Met Ser Lys Leu Ala  
 1075 1080 1085  
 Asn Asn His Phe Met Ser Val Leu Asn Thr Ala Asn Asn Ser His Ser  
 1090 1095 1100  
 Ser Arg Arg Gly Asp Arg Ser Ser Leu Met Leu Gln Gln Gln Gln Pro  
 1105 1110 1115 1120  
 Thr His Ser Ala Phe Leu Glu Gln Thr Arg Gly Arg Gly Gly Gly Val  
 1125 1130 1135  
 Leu Gly Ser Gly Thr Glu Gln Thr Lys Asp His Val Glu Arg Met Lys  
 1140 1145 1150  
 Arg Asp Trp Ile Leu Asn Met Ile Ser Pro Glu Asp Lys Asn Thr Thr  
 1155 1160 1165  
 Thr Thr Thr Pro Ser Asn Ala Gly Arg Thr Leu Gly Tyr Gly Ser Asn  
 1170 1175 1180  
 Ile Thr Gly Ile Asn Thr Ile Lys Gln Asp Asp Lys Ser Met Met Asp  
 1185 1190 1195 1200  
 Lys Leu Ser Glu Met Ser Ser Phe Arg Thr  
 1205 1210

<210> 38  
 <211> 2376  
 <212> DNA  
 <213> SHRIMP

<400> 38  
 atgtctcttg ttgagaataa tacccaagaa gaaatgattc tggaaactac tgttgaaggt 60  
 gttgtggagg gagcagaagt tgcccctaga ggtgtcaaga gacccttcc ttcttcctca 120  
 tcttcttctt cagcttcgga tagtgaagat gatgaaggag gagagcaacc acaaacgaaa 180  
 ccccaaaga agaaacgtaa tatcaatagc ggaaagtact ggaaaatcga aacaatcgaa 240  
 ccagcatctc cagaaatgct cagtgtctgta aatgatattg ataacgtgtc caaaactatt 300  
 cctctaattcg ataatagttt tggcgttcag tttaaaaaga gtgtatctga agaacagatc 360  
 aaaacgctac tactgaaac tattgccgtg gaatatggaa caatcacaaa tgttaaatat 420  
 tcaaccttta atcaactcga aaggaccgga gagcctctta agaagaagcg ctcaaacaat 480  
 ggaaataaca actacagata ctggcaaatt cgaattgaag ccgctgcagc agagaatgtt 540  
 acacaagctg ttttgacgc aatcgttgaa ggaaatgaca ccgtgatcaa ggcaatccctc 600  
 ctccctgaag gggagggaat cgggcttcaa tttacaaga gtggttagctc tcaacaagct 660  
 aaaaatattg tccaggctgc cgatattgaa tttggacaag ttgcgcacat gaagtgtaat 720  
 ttgttccaca agatggagaa ggccgatgaa tcttctaatt cttctggtga atcaccaaag 780  
 gtttaagaaag taaggaggaa caagtcccag cctacaaatt cttactacac tttcactatg 840  
 atcggggatt ctcttcaaga gcgtattgat aacgcaatca aagttatcga aatgtctcca 900  
 gtttaaggagc cttctccaa ttctgtgctg gctgtgaag aagacaccac tactacgacc 960  
 actacttcca ctgggtgtgt taatccacga gggattaagg atattcactt tttcgattca 1020  
 tccatttcta aggatgttt cactgtgagg aatattgttg cagcaaatgg tgaagttcca 1080  
 caagaagaat tcgtttctga gttgtacact aaccttctaa aggttgaaga gaaggtggat 1140  
 catcctactt tcaagaagct tattcatgac cgtacaatga atcgacacat taaggcatgg 1200  
 tactgcatct gccctacta caccacagga ggcgtcccc ctgcagctga taaggtttcc 1260

```

gctaaggga tttgtacct cagaatatac gaggacagga ctggagtgtt ccaattcgat 1320
ggggcacata catctactac cccagcacag gcagccgagg caactggtgc tattcacaag 1380
tctatgctct tccagagtcc tggaactgat attcaaaagt tcctcgatgc taagaaggca 1440
gaaggtttgg agcctatttc atcgggcgaa attgtgtacc gttcaaagtg gagccccaat 1500
gatagcaggg caacacgctg cttcaaattt tattcctctt cagacgagaa gatgaacatt 1560
gctgatgttt tgtctattgt tcatactgat ggacttttca gtagtgtaca ctttagaaaag 1620
gatactatgg aatatggtgt tgcaaagagc aagagtaaaa ttatcccaa aactatcaag 1680
attaagaagg gaggagatac tttccatagc gaggaggata ttgaagtgcc tgtaaaattc 1740
actgcaatca cttcggagga acttaatagg gaatgtaaca ccaagggaat gaacagcctc 1800
cgagcacaca agaaacgaaa gagcaactct tctactacta ctacttccac cacttccact 1860
tcaacaacag caaatactcc aaagaagacg aagaagagcg cttctgctgc cagtgaacca 1920
tttgcaaagc ttacttttaga ttatgttgat agtacatcat ttgtatttta caatatcagt 1980
aaggaaatgg tgcagagaat tttggctcag gagagagtaa agacgctaaa ggcagtcaag 2040
aacgaagaga agatggaaat tgtagaggga gaagaagcac aagaaactta tagaggaatc 2100
gtaaagatca agacgaatgc aaaggcatac aatcttgcca acaaaacatc tggagtactt 2160
ttccctgctg ataaggtgtg tctaaagcac acattggaag atttggggga tgtacttgat 2220
tttgatgttg taaggaggga taatgttaat aagacggtcg cttctactac tactacatca 2280
tctgaaaata aggcaagcgg aggagatgat gaagaaactc caatggaatt tgaactgac 2340
ggagagaagc tgttgcacga attgttgaat gaataa 2376

```

<210> 39  
<211> 783  
<212> PRT  
<213> SHRIMP

<400> 39

Met	Ser	Leu	Val	Glu	Asn	Asn	Thr	Gln	Glu	Glu	Met	Ile	Thr	Thr	Val
1				5					10					15	
Glu	Gly	Val	Val	Glu	Gly	Ala	Glu	Val	Ala	Pro	Arg	Gly	Val	Lys	Arg
		20						25					30		
Pro	Leu	Pro	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ala	Ser	Asp	Ser	Glu	Asp
		35					40					45			
Asp	Glu	Gly	Gly	Glu	Gln	Pro	Gln	Thr	Lys	Pro	Pro	Lys	Lys	Lys	Arg
	50				55					60					
Asn	Ile	Asn	Ser	Gly	Lys	Tyr	Trp	Lys	Ile	Glu	Thr	Ile	Glu	Pro	Asp
65				70					75					80	
Glu	Met	Leu	Ser	Ala	Val	Asn	Asp	Ile	Asp	Asn	Val	Ser	Lys	Thr	Ile
				85				90						95	
Pro	Leu	Ile	Asp	Asn	Ser	Phe	Gly	Val	Gln	Phe	Lys	Lys	Ser	Val	Ser
		100					105						110		
Glu	Glu	Gln	Ile	Lys	Thr	Leu	Leu	Thr	Glu	Thr	Ile	Ala	Val	Glu	Tyr
	115					120					125				
Gly	Thr	Ile	Thr	Asn	Val	Lys	Tyr	Ser	Thr	Phe	Asn	Gln	Leu	Glu	Arg
	130				135						140				
Thr	Gly	Glu	Pro	Leu	Lys	Lys	Lys	Arg	Ser	Asn	Asn	Gly	Asn	Asn	Asn
145				150					155					160	
Tyr	Arg	Tyr	Trp	Gln	Ile	Arg	Ile	Glu	Ala	Ala	Ala	Ala	Glu	Asn	Val
		165						170						175	
Thr	Gln	Ala	Val	Leu	Asp	Ala	Ile	Val	Glu	Gly	Asn	Asp	Thr	Val	Ile
	180						185						190		
Lys	Ala	Ile	Leu	Leu	Pro	Glu	Gly	Gly	Ile	Gly	Leu	Gln	Phe	Asn	
	195					200				205					
Lys	Ser	Val	Ser	Ser	Gln	Gln	Ala	Lys	Asn	Ile	Val	Gln	Ala	Ala	Asp
	210				215					220					
Ile	Glu	Phe	Gly	Gln	Val	Ala	His	Met	Lys	Cys	Asn	Leu	Phe	His	Lys
225				230					235					240	
Met	Glu	Lys	Ala	Asp	Glu	Ser	Ser	Asn	Ser	Ser	Gly	Glu	Ser	Pro	Lys
			245					250						255	
Val	Lys	Lys	Val	Arg	Arg	Asn	Lys	Ser	Gln	Pro	Thr	Asn	Ser	Tyr	Tyr
		260				265						270			
Thr	Phe	Thr	Met	Ile	Gly	Asp	Ser	Leu	Gln	Glu	Arg	Ile	Asp	Asn	Ala

Ile	Lys	Val	Ile	Glu	Met	Ser	Pro	Val	Lys	Arg	Pro	Phe	Ser	Asn	Ser	
Ala	Ala	Ala	Ala	Glu	Glu	Asp	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Ser	Thr	
Gly	Val	Val	Asn	Pro	Arg	Gly	Ile	Lys	Asp	Ile	His	Phe	Phe	Asp	Ser	
Ser	Ile	Ser	Lys	Gly	Cys	Phe	Thr	Val	Arg	Asn	Ile	Val	Ala	Ala	Asn	
Gly	Glu	Val	Pro	Gln	Glu	Glu	Phe	Val	Ser	Glu	Leu	Tyr	Thr	Asn	Leu	
Leu	Lys	Val	Glu	Glu	Lys	Val	Asp	His	Pro	Thr	Phe	Lys	Lys	Leu	Ile	
His	Asp	Arg	Thr	Met	Asn	Arg	His	Ile	Lys	Ala	Trp	Tyr	Cys	Ile	Cys	
Pro	Tyr	Tyr	Thr	Thr	Gly	Gly	Val	Pro	Pro	Ala	Ala	Asp	Lys	Val	Ser	
Ala	Lys	Gly	Ile	Ala	Tyr	Ile	Tyr	Glu	Asp	Arg	Thr	Gly	Val	Phe	Gln	
Phe	Asp	Gly	Ala	His	Thr	Ser	Thr	Thr	Pro	Ala	Gln	Ala	Ala	Glu	Ala	
Thr	Gly	Ala	Ile	His	Lys	Ser	Met	Leu	Phe	Gln	Ser	Pro	Gly	Thr	Asp	
Ile	Gln	Lys	Phe	Leu	Asp	Ala	Lys	Lys	Ala	Glu	Gly	Leu	Glu	Pro	Ile	
Ser	Ser	Gly	Glu	Ile	Val	Tyr	Arg	Ser	Lys	Trp	Ser	Pro	Asn	Asp	Ser	
Arg	Ala	Thr	Arg	Cys	Phe	Lys	Phe	Tyr	Ser	Ser	Ser	Asp	Glu	Lys	Met	
Asn	Ile	Ala	Asp	Val	Leu	Ser	Ile	Val	His	Thr	Asp	Gly	Leu	Phe	Ser	
Ser	Val	His	Phe	Arg	Lys	Asp	Thr	Met	Glu	Tyr	Gly	Val	Ala	Lys	Ser	
Lys	Ser	Lys	Ile	Ile	Pro	Lys	Thr	Ile	Lys	Ile	Lys	Lys	Gly	Gly	Asp	
Thr	Phe	His	Ser	Glu	Glu	Asp	Ile	Glu	Val	Pro	Val	Lys	Phe	Thr	Ala	
Ile	Thr	Ser	Glu	Glu	Leu	Asn	Arg	Glu	Cys	Asn	Thr	Lys	Gly	Met	Asn	
Ser	Leu	Arg	Ala	His	Lys	Lys	Arg	Lys	Ser	Asn	Ser	Ser	Thr	Thr	Thr	
Thr	Ser	Thr	Thr	Ser	Thr	Ser	Thr	Thr	Ala	Asn	Thr	Pro	Lys	Lys	Thr	
Lys	Lys	Ser	Ala	Ser	Ala	Ala	Ser	Asp	Pro	Phe	Ala	Lys	Leu	Thr	Leu	
Asp	Tyr	Val	Asp	Ser	Thr	Ser	Phe	Val	Phe	Tyr	Asn	Ile	Ser	Lys	Glu	
Met	Val	Gln	Arg	Ile	Leu	Ala	Gln	Glu	Arg	Val	Lys	Thr	Leu	Lys	Ala	
Val	Lys	Asn	Glu	Glu	Lys	Met	Glu	Ile	Val	Glu	Gly	Glu	Glu	Ala	Gln	
Glu	Tyr	Gly	Ile	Val	Lys	Ile	Lys	Thr	Asn	Ala	Lys	Ala	Tyr	Asn	Leu	
Ala	Asn	Lys	Thr	Ser	Gly	Val	Leu	Phe	Pro	Ala	Asp	Lys	Val	Cys	Leu	
Lys	His	Thr	Leu	Glu	Asp	Leu	Gly	Asp	Val	Leu	Asp	Phe	Asp	Val	Val	
Arg	Glu	Asp	Asn	Val	Asn	Lys	Thr	Val	Ala	Ser	Thr	Thr	Thr	Thr	Ser	
Ser	Glu	Asn	Lys	Ala	Ser	Gly	Gly	Asp	Asp	Glu	Glu	Thr	Pro	Met	Glu	

WO 01/38351

PCT/US00/28888

120

Phe Glu Thr Asp Gly Glu Lys Leu Leu His Glu Leu Leu Asn Glu  
 770 775 780

<210> 40  
 <211> 1878  
 <212> DNA  
 <213> SHRIMP

<400> 40  
 atgagctggt cttcttcttc atcgtgctca agttcatctg aagaggagaa tgaggtagga 60  
 gtagaaggag gaggaggcag aatcggacca acagaggcca agaaaaagat cctccgtaaa 120  
 cgaaagagat cttctgttaa aagtacatca tcttcttctt cctcatcatc atcatcagac 180  
 gattctgact ctgatataga agaaaaagaa ggaagaaaac tatacgtgga tattgcagat 240  
 acaaggaaac cgcccaaagt aagaaaactg gatactcctt cacaaacttt agagaacgac 300  
 ctctacatgt ctagtcatc ttcttcttcc tctcatctt ccgactcatc atcgtcttct 360  
 ggtgaagaag aaagtgacga tgatgatgat gacgattatg acccagataa tgtccatggt 420  
 cttggttgta agaaggaaaa atctcccaa gacatagaag ctgaaaagga aaaggaggaa 480  
 gagtatgaag aagaattcaa gagaatggca ttaccttcac ggataaacac atctgtagat 540  
 gattgtgta tacctgatcg gattttaacc ctcttttcta cacttttgaa gaaaaatagt 600  
 ttccagttct ctccagccagt ttctttcttc cgggttggtga tgaagcaagt aaacgaggcc 660  
 atgaattcag cattctcttc catgttatcc agttctggtg tgagggtggt ggaggactct 720  
 ttgggtgaca catctaaaat ttctctcttt ataacacctc aaacggatac tagtaattca 780  
 tcttcatcat cgacgttcgt caataattgt acagatgaag atatcaagaa gcgtaacatt 840  
 gcaatgggaa gtagtcaga attgctgtca aatattgcag ccagttctaa tgaggagaat 900  
 aatttccgcc ctgtagtttc cttaatgcga ggaccaactt gtggagggtc taatgcatcc 960  
 aacaagaaac tcaatagtaa caggcaact attcccaaag tattaaacaa gggttatatt 1020  
 tttagagaaa tacacagtgt tatcgcgcta tatttatcgt ccgtctgtgt gcagcgagca 1080  
 atgaataatg acaacacaaa ttctagcgga tacgctgaag ggatgggttac taaaatcttg 1140  
 aatattattg gtaaaattcc ttataatgaa atgagtagag aaaaattcat atccgttgga 1200  
 agagatgcac tatatttgta ccagaatgtg atcacggata tgactggccc caaacataac 1260  
 aagagactcc gtatccctca acaacaagct gatttttggt acattatagc catgttggtt 1320  
 aatgatgttc ccattacctc agatttactt ttaactggaa aggcgacaaa tttagtacaa 1380  
 tttgcttctg ctatgggtga tctgcatat cgcctggctg tccataaaat ggcgtctgtt 1440  
 ttcaatagta gttattccgt atataaagtc ctagatcttg accataaaat gttattaagg 1500  
 gctaatttaa tctatctat tttatcagct agaaataagt gtctcagtga aagaaaacct 1560  
 agaacattaa ctccagagcg gtatttggtc ctaaatcatc ttttgcgaa caaattgagg 1620  
 tctagtgggt tgaccagtga agagagttct ctaggaaacag ccgtaaaatt ggtgtcacag 1680  
 caattaatgt atgaggggtg gactcgtcaa accatcgagg acggatgtag catgattagc 1740  
 ggaaactttg aggatgaaga cgggtgaaca ctgaaatgtt tgggagccga tggttaaggac 1800  
 gtgaagactg ttgactatc tgcattgcta tctgataggc ttgaaaaaaa cattagaaga 1860  
 aacgtccctt tctactga 1878

<210> 41  
 <211> 621  
 <212> PRT  
 <213> SHRIMP

<400> 41  
 Met Ser Cys Ser Ser Ser Ser Ser Cys Ser Ser Ser Ser Glu Glu Glu  
 1 5 10 15  
 Asn Glu Val Gly Val Glu Gly Gly Gly Gly Arg Ile Gly Pro Thr Glu  
 20 25 30  
 Ala Lys Lys Lys Ile Leu Arg Lys Arg Lys Arg Ser Ser Val Lys Ser  
 35 40 45  
 Thr Ser Ser Ser Ser Ser Ser Ser Ser Ser Asp Asp Ser Asp Ser  
 50 55 60  
 Asp Arg Glu Glu Lys Glu Gly Arg Lys Leu Tyr Val Asp Ile Ala Asp  
 65 70 75 80  
 Thr Arg Lys Pro Pro Lys Val Arg Lys Leu Asp Thr Pro Ser Gln Thr  
 85 90 95

Leu	Glu	Asn	Asp	Leu	Tyr	Met	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
			100					105						110		
Ser	Ser	Asp	Ser	Ser	Ser	Ser	Ser	Gly	Glu	Glu	Glu	Ser	Asp	Asp	Asp	
		115					120					125				
Asp	Asp	Asp	Asp	Tyr	Asp	Pro	Asp	Asn	Val	His	Val	Leu	Gly	Cys	Lys	
		130				135				140						
Lys	Glu	Lys	Ser	Pro	Gln	Asp	Ile	Glu	Ala	Glu	Lys	Glu	Lys	Glu	Glu	
145					150					155					160	
Glu	Tyr	Glu	Glu	Glu	Phe	Lys	Arg	Met	Ala	Leu	Pro	Ser	Arg	Ile	Asn	
				165				170						175		
Thr	Ser	Val	Asp	Asp	Cys	Val	Ile	Pro	Asp	Arg	Ile	Leu	Thr	Leu	Phe	
		180						185				190				
Ser	Thr	Leu	Leu	Lys	Lys	Asn	Ser	Phe	Gln	Phe	Ser	Gln	Pro	Val	Ser	
		195					200					205				
Phe	Leu	Arg	Leu	Val	Met	Lys	Gln	Val	Asn	Glu	Ala	Met	Asn	Ser	Ala	
		210				215					220					
Phe	Ser	Ser	Met	Leu	Ser	Ser	Ser	Gly	Met	Arg	Leu	Val	Glu	Asp	Ser	
225					230					235					240	
Leu	Gly	Asp	Thr	Ser	Lys	Ile	Ser	Ser	Phe	Ile	Thr	Pro	Gln	Thr	Asp	
				245					250					255		
Thr	Ser	Asn	Ser	Ser	Ser	Ser	Ser	Thr	Phe	Val	Asn	Asn	Cys	Thr	Asp	
		260						265					270			
Glu	Asp	Ile	Lys	Lys	Arg	Asn	Ile	Ala	Met	Gly	Arg	Val	Ala	Glu	Leu	
		275					280					285				
Leu	Ser	Asn	Ile	Ala	Ala	Ser	Ser	Asn	Glu	Glu	Asn	Asn	Phe	Arg	Pro	
		290				295					300					
Val	Val	Ser	Leu	Met	Arg	Gly	Pro	Thr	Cys	Gly	Gly	Ser	Asn	Asn	Lys	
305					310					315					320	
Lys	Leu	Asn	Ser	Asn	Arg	Gln	Thr	Ile	Pro	Gln	Val	Leu	Asn	Lys	Val	
				325					330					335		
Ile	Phe	Phe	Arg	Glu	Ile	His	Ser	Val	Ile	Ala	Leu	Tyr	Leu	Ser	Ser	
			340					345					350			
Val	Cys	Val	Gln	Arg	Ala	Met	Asn	Asn	Asp	Asn	Thr	Asn	Ser	Ser	Gly	
		355					360					365				
Tyr	Ala	Glu	Gly	Met	Val	Thr	Lys	Ile	Leu	Asn	Ile	Ile	Gly	Lys	Ile	
		370				375					380					
Pro	Tyr	Asn	Glu	Met	Ser	Arg	Glu	Lys	Phe	Ile	Ser	Val	Gly	Arg	Asp	
385					390					395					400	
Ala	Leu	Tyr	Leu	Tyr	Gln	Asn	Val	Ile	Thr	Asp	Met	Thr	Gly	Pro	Lys	
				405					410					415		
His	Asn	Lys	Arg	Leu	Arg	Ile	Pro	Gln	Gln	Gln	Ala	Asp	Phe	Cys	Tyr	
			420					425					430			
Ile	Ile	Ala	Met	Leu	Val	Asn	Asp	Val	Pro	Ile	Thr	Ser	Asp	Leu	Leu	
		435					440					445				
Leu	Thr	Gly	Lys	Ala	Thr	Asn	Leu	Val	Gln	Phe	Ala	Ser	Ala	Met	Val	
		450				455					460					
Asp	Pro	Ala	Tyr	Arg	Leu	Ala	Val	His	Lys	Met	Ala	Ser	Val	Phe	Asn	
465					470					475					480	
Ser	Ser	Tyr	Ser	Val	Tyr	Lys	Val	Leu	Asp	Leu	Asp	His	Lys	Met	Leu	
				485					490					495		
Leu	Arg	Ala	Asn	Leu	Ile	Leu	Ser	Ile	Leu	Ser	Ala	Arg	Asn	Lys	Cys	
			500					505					510			
Leu	Ser	Lys	Pro	Arg	Thr	Leu	Thr	Gln	Ser	Val	Tyr	Leu	Phe	Leu	Asn	
		515					520					525				
His	Leu	Leu	Arg	Asn	Lys	Leu	Arg	Ser	Ser	Gly	Leu	Thr	Ser	Glu	Glu	
		530				535					540					
Ser	Ser	Leu	Gly	Thr	Ala	Val	Lys	Leu	Val	Ser	Gln	Gln	Leu	Met	Tyr	
545					550					555					560	
Glu	Gly	Val	Thr	Arg	Gln	Thr	Ile	Glu	Asp	Gly	Cys	Ser	Met	Ile	Ser	
				565					570					575		
Gly	Asn	Phe	Glu	Asp	Glu	Asp	Gly	Val	Thr	Leu	Lys	Cys	Leu	Gly	Ala	

	580		585		590
Asp Val Lys Asp Val Lys Thr Val Gly Leu Ser Ala Leu Leu Ser Asp					
	595		600		605
Arg Leu Arg Lys Asn Ile Arg Arg Asn Val Pro Phe Tyr					
	610		615		620

<210> 42  
 <211> 3303  
 <212> DNA  
 <213> SHRIMP

<400> 42

atgtttggaa	gttctgctaa	taactttaat	ggtgacaaga	aatcttcctc	atcatcatca	60
gctgccgcat	catctgacga	tcagcagtta	ggtccccttg	gactgtctac	tgctgatttc	120
aagaaagttg	ctgccattct	tgccaacaga	acagagtcct	tatatctgtt	gccagattct	180
cccaacttta	agaatgtgat	taacaaccct	aaccagatat	ctattgtgcc	gtttctgggt	240
tcatcgaagg	cagctgaaag	tggtagtga	aacaagaatg	aaaaccaggc	tgaaaattct	300
tctaaaggag	gaagtgatgg	aaagaaatca	tcgcagcaga	acaagtttaa	cctattgaac	360
aaggtagagg	ctgaagaaat	ggcctttaaa	cgtgtggctg	aactcattgc	ggatactcct	420
ccctctaaag	ataatccatt	gagggatgac	cctgatgcta	ttccatcacg	caacccatgg	480
gtcaaattga	ctcagaagaa	tctggaatat	ctttctggg	aagcagtaac	aattgaagtc	540
tccaatgata	ggagtatccg	tagtggaaga	tatcttcaag	ccagtgaagt	gggggagaat	600
ccattcctaa	tgaccatcag	tgttgacatt	agaatcctgc	aaagaatggc	acttaatgtc	660
gtgtgggtct	tcaacagatt	cttccgcatg	gtttctggac	ttggagtaga	aaacagggcc	720
aattccacct	atgtagcaac	tagcgatgct	attgccaga	tctgggtaga	gatgctcctc	780
aagaacttta	tttctggaga	aaatgtgccc	caggcactga	agtatttgaa	ggaacattat	840
gagcatgttt	ataacaagat	cagtaaagt	ggacgtcagc	catcctattt	tggtgtgaa	900
tttgaaagag	tggacaacac	gattggattt	gtcaattctg	atactgaaca	taatggatca	960
tcatacatgg	aatacaggtg	ctttgacaca	atcaggaaga	atgcatcatc	tgggccaaagt	1020
ggagggcgaa	agagtgggtg	cctgtcttct	ggaacattct	tcattgataa	cgaatgggg	1080
aataacaata	gtagtgcagc	tgacgcttct	gcccctgctg	tttctgctgg	agtttctcca	1140
tcactttctc	catttagcag	tgatggagat	gatgatgacg	acgattgtag	tggtgatgac	1200
gtgtggggga	agaagatgat	attcaacaca	tcaggagacg	gatcaggaga	atcttctggg	1260
cagaacggtg	gtggtgcatc	aacttacaag	agatttaggt	gtggagaaaa	tactgcttct	1320
ctttctcaga	aggaaaatgt	tcgtctcatg	gcgatgccaa	agggaaatga	agataaacia	1380
ctactcaaga	acattatcaa	ctttctgaat	agtgcactta	actctgttga	aaacatgta	1440
atgtgtacag	atgaaaatat	cttcgatgag	gatcaagccg	agcattatac	gtcaaacaaag	1500
gaactataca	aggctattgt	ttgctccaac	ccagccaatg	tgtacagagt	aatgggtgaa	1560
ctgtttgtca	accttattct	tccccgtctt	aggaacccaa	ttgtgagtga	cattgaaact	1620
gtacaaaatc	ttccttcaaa	caatggatcg	gtgagaacaa	agaagatggg	tgacatgga	1680
tgtacagata	tgcgctatga	catccctcca	tatgcaaagg	gaaagattcg	tcttagtgcc	1740
aagagagctt	gtgagtgcag	aaaactgtgc	aaggacgtga	ggtgctttga	caagtgcga	1800
gaggacaatc	tcacccttag	ccagaaggca	ggaaggagg	tggaggaacc	ttttcccgcg	1860
aaccacaatt	ctcacaggag	taacgctcac	gactttactt	tctatgacaa	gtacagggca	1920
aggatgaaca	agctcaagaa	ggattcaaa	aagaaggtaa	agaagattga	cacctttaca	1980
acaacagacg	atcttctcct	gcaagatagg	aacgcttttg	atctacttag	aaagtgcctc	2040
ctttctgcct	ctcttcatca	cattttctgt	cctgatgtgc	ttatgggtga	tagaggagac	2100
agctttcaata	ttacttttgc	aaacaacaaa	ctcagagtgt	ataatgaacg	taacggaatt	2160
gaagaagtta	cttcttcaca	aacggtcaac	gccaaggaa	cacttgagga	tattacaaaa	2220
attaaaatga	agagagggga	tgatattata	gatgttgtga	agagtaaagg	actttctttg	2280
aggggaattct	ctaagaaggt	tagtaagatt	gtgagaagg	ttaatgagat	cacaaaccaa	2340
ctctgcaaca	actgcaacgt	taactcttct	aatggagatg	tggatttcca	cgtctttact	2400
tctgtgtgtg	tctacatcca	caacattatt	cctgtgctcg	aagatatctc	catttttgca	2460
gaattgggtg	aagaattgac	caagcttggt	aaggagtgtg	gagacgtggc	tggagaggac	2520
aagacatatg	atgatattat	ccgcaattac	gaaattactg	taaagtactt	taagctcttt	2580
aatgcactcg	ttaaattctg	tcacaggaat	tataatgtgg	cagtaacctc	tgccattaac	2640
aggagagggg	acatgtgcat	ggtgagcaac	cttgtcgggt	attattgtaa	gctgtctgat	2700
aacgctatcc	agtatcacga	atcactatgc	tctttgcact	ctagcatctc	ttatgcagac	2760
tattatacgt	ctcgcaataa	caattctgaa	gatggaggag	gaaactcttc	ttcagaaaag	2820
agcaatgcag	atgtagccaa	gactatggcc	tctttctatg	accagttcga	taagagtga	2880

```

gacagcaaga aaaataagaa caaaacttca aatgagatcc ttataaaaaat gttccaaatg 2940
gatagggttt tggatggcat ggatgatgat gatgatgaag atagtgatag tagtagcagt 3000
gagaatgaag aggaggagga agaggaggaa attgtaaaga aaccagcaaa gaagaggaaa 3060
gtggaagatg ttgatagcaa taagaagaca ctgccaaagg aacctgccgt taagaagggtg 3120
aagcaggaag aagatgtgga gatggaggaa gtgaaggaag cagcagcaga agaagaaaag 3180
aaagaggaac aggaggcgaa ggaggaagac gctactgagt atgacgacga tacagaagag 3240
gacgagaaag cagtagcatc tgatgaagat gaagatgatg aagattctaa agctattttc 3300
taa                                     3303

```

<210> 43  
 <211> 1100  
 <212> PRT  
 <213> SHRIMP

<400> 43

Met	Phe	Gly	Ser	Ser	Ala	Asn	Asn	Phe	Asn	Gly	Asp	Lys	Lys	Ser	Ser	1	5	10	15
Ser	Ser	Ser	Ser	Ala	Ala	Ala	Ser	Ser	Asp	Asp	Gln	Gln	Leu	Gly	Pro	20	25	30	
Leu	Gly	Leu	Ser	Thr	Ala	Asp	Phe	Lys	Lys	Val	Ala	Ala	Ile	Leu	Ala	35	40	45	
Asn	Arg	Thr	Glu	Ser	Leu	Tyr	Leu	Leu	Pro	Asp	Ser	Pro	Asn	Phe	Lys	50	55	60	
Asn	Val	Ile	Asn	Asn	Pro	Asn	Gln	Ile	Ser	Ile	Val	Pro	Phe	Leu	Gly	65	70	75	80
Ser	Ser	Lys	Ala	Ala	Glu	Ser	Gly	Ser	Ala	Asn	Lys	Asn	Glu	Asn	Gln	85	90	95	
Ala	Glu	Asn	Ser	Ser	Lys	Gly	Gly	Ser	Asp	Gly	Lys	Lys	Ser	Ser	Gln	100	105	110	
Gln	Asn	Lys	Phe	Asn	Leu	Leu	Asn	Lys	Val	Glu	Ala	Glu	Glu	Met	Ala	115	120	125	
Phe	Lys	Arg	Val	Ala	Glu	Leu	Ile	Ala	Asp	Thr	Pro	Pro	Ser	Lys	Asp	130	135	140	
Asn	Pro	Leu	Arg	Asp	Asp	Pro	Asp	Ala	Ile	Pro	Ser	Arg	Asn	Pro	Trp	145	150	155	160
Val	Lys	Leu	Thr	Gln	Lys	Asn	Leu	Glu	Tyr	Leu	Phe	Trp	Glu	Ala	Val	165	170	175	
Thr	Ile	Glu	Val	Ser	Asn	Asp	Arg	Ser	Ile	Arg	Ser	Gly	Arg	Tyr	Leu	180	185	190	
Gln	Ala	Ser	Glu	Val	Gly	Glu	Asn	Pro	Phe	Leu	Met	Thr	Ile	Ser	Val	195	200	205	
Asp	Ile	Arg	Ile	Leu	Gln	Arg	Met	Ala	Leu	Asn	Val	Val	Trp	Phe	Phe	210	215	220	
Asn	Arg	Phe	Phe	Arg	Met	Val	Ser	Gly	Leu	Gly	Val	Glu	Asn	Arg	Ala	225	230	235	240
Asn	Ser	Thr	Tyr	Val	Ala	Thr	Ser	Asp	Ala	Ile	Ala	Gln	Ile	Trp	Val	245	250	255	
Glu	Met	Leu	Leu	Lys	Asn	Phe	Ile	Ser	Gly	Glu	Asn	Val	Pro	Gln	Ala	260	265	270	
Leu	Lys	Tyr	Leu	Lys	Glu	His	Tyr	Glu	His	Val	Tyr	Asn	Lys	Ile	Ser	275	280	285	
Lys	Cys	Gly	Arg	Gln	Pro	Ser	Tyr	Phe	Val	Val	Glu	Phe	Glu	Arg	Val	290	295	300	
Asp	Asn	Thr	Ile	Gly	Phe	Val	Asn	Ser	Asp	Thr	Glu	His	Asn	Gly	Ser	305	310	315	320
Ser	Tyr	Met	Glu	Tyr	Arg	Cys	Phe	Asp	Thr	Ile	Arg	Lys	Asn	Ala	Ser	325	330	335	
Ser	Gly	Pro	Ser	Gly	Gly	Gly	Lys	Ser	Gly	Val	Leu	Ser	Ser	Gly	Thr	340	345	350	
Phe	Phe	Ile	Asp	Asn	Glu	Met	Gly	Asn	Asn	Asn	Ser	Ser	Ala	Ala	Ala	355	360	365	

Ala	Ser	Ala	Pro	Ala	Val	Ser	Ala	Gly	Val	Ser	Pro	Ser	Leu	Ser	Pro
370						375					380				
Phe	Ser	Ser	Asp	Gly	Asp	Asp	Asp	Asp	Asp	Asp	Cys	Ser	Gly	Asp	Asp
385					390					395					400
Val	Trp	Gly	Lys	Lys	Met	Ile	Phe	Asn	Thr	Ser	Gly	Asp	Gly	Ser	Gly
				405					410					415	
Glu	Ser	Ser	Gly	Gln	Asn	Gly	Gly	Gly	Ala	Ser	Thr	Tyr	Lys	Arg	Phe
			420					425					430		
Arg	Cys	Gly	Glu	Asn	Thr	Ala	Ser	Leu	Ser	Gln	Lys	Glu	Asn	Val	Arg
		435				440						445			
Leu	Met	Ala	Met	Pro	Lys	Gly	Asn	Glu	Asp	Lys	Gln	Leu	Leu	Lys	Asn
	450					455					460				
Ile	Ile	Asn	Phe	Leu	Asn	Ser	Ala	Leu	Asn	Ser	Val	Glu	Asn	His	Val
465					470					475					480
Met	Cys	Thr	Asp	Glu	Asn	Ile	Phe	Asp	Glu	Asp	Gln	Ala	Glu	His	Tyr
				485					490					495	
Thr	Ser	Asn	Lys	Glu	Leu	Tyr	Lys	Ala	Ile	Val	Cys	Ser	Asn	Pro	Ala
			500					505					510		
Asn	Val	Tyr	Arg	Val	Met	Val	Glu	Leu	Phe	Val	Asn	Leu	Ile	Leu	Pro
		515					520					525			
Arg	Leu	Arg	Asn	Pro	Ile	Val	Ser	Asp	Ile	Glu	Thr	Val	Gln	Asn	Leu
	530					535					540				
Pro	Ser	Asn	Asn	Gly	Ser	Val	Arg	Thr	Lys	Lys	Met	Val	Glu	His	Gly
545					550					555					560
Cys	Thr	Asp	Met	Arg	Tyr	Asp	Ile	Pro	Pro	Tyr	Ala	Lys	Gly	Lys	Ile
				565					570					575	
Arg	Leu	Ser	Ala	Lys	Arg	Ala	Cys	Glu	Cys	Arg	Lys	Leu	Cys	Lys	Asp
			580					585					590		
Val	Arg	Cys	Phe	Asp	Lys	Ser	Arg	Glu	Ala	Asn	Leu	Thr	Pro	Ser	Gln
		595					600					605			
Lys	Ala	Gly	Arg	Glu	Val	Glu	Glu	Pro	Phe	Pro	Arg	Asn	His	Asn	Ser
	610					615					620				
His	Arg	Ser	Asn	Ala	His	Asp	Phe	Thr	Phe	Tyr	Asp	Lys	Tyr	Arg	Ala
625					630					635					640
Arg	Met	Asn	Lys	Leu	Lys	Lys	Asp	Ser	Lys	Lys	Lys	Val	Lys	Lys	Ile
				645					650					655	
Asp	Thr	Phe	Thr	Thr	Thr	Asp	Asp	Phe	Leu	Leu	Gln	Asp	Arg	Asn	Ala
			660					665					670		
Phe	Asp	Leu	Leu	Arg	Lys	Cys	Phe	Leu	Ser	Ala	Ser	Leu	His	His	Ile
		675					680					685			
Phe	Cys	Pro	Asp	Val	Leu	Met	Val	His	Arg	Gly	Asp	Ser	Phe	Asn	Ile
	690					695					700				
Asn	Phe	Ala	Asn	Asn	Lys	Leu	Glu	Cys	Tyr	Asn	Glu	Arg	Asn	Gly	Ile
705					710					715					720
Glu	Glu	Val	Thr	Ser	Ser	Gln	Thr	Val	Asn	Ala	Lys	Glu	Ala	Leu	Glu
				725						730				735	
Asp	Ile	Thr	Lys	Ile	Lys	Met	Lys	Arg	Gly	Asp	Asp	Ile	Ile	Asp	Val
			740					745					750		
Val	Lys	Ser	Lys	Gly	Leu	Ser	Leu	Arg	Glu	Phe	Ser	Lys	Lys	Val	Ser
		755					760					765			
Lys	Ile	Val	Arg	Arg	Phe	Asn	Glu	Ile	Thr	Asn	Gln	Leu	Cys	Asn	Asn
		770				775					780				
Cys	Asn	Val	Asn	Ser	Ser	Asn	Gly	Asp	Val	Asp	Phe	His	Val	Phe	Thr
785					790					795					800
Ser	Val	Cys	Val	Tyr	Ile	His	Asn	Ile	Ile	Pro	Val	Leu	Glu	Asp	Ile
				805					810					815	
Ser	Ile	Phe	Ala	Glu	Leu	Gly	Glu	Glu	Leu	Thr	Lys	Leu	Val	Lys	Glu
			820					825					830		
Cys	Arg	Asp	Val	Ala	Gly	Glu	Asp	Lys	Thr	Tyr	Asp	Asp	Ile	Ile	Arg
		835					840					845			
Asn	Tyr	Glu	Ile	Thr	Val	Lys	Tyr	Phe	Lys	Leu	Phe	Asn	Ala	Leu	Val



WO 01/38351

PCT/US00/28888

125

850						855						860					
Lys	Phe	Cys	His	Arg	Asn	Tyr	Asn	Val	Ala	Val	Thr	Ser	Ala	Ile	Asn		
865					870					875					880		
Arg	Arg	Gly	Tyr	Met	Cys	Met	Val	Ser	Asn	Leu	Val	Gly	Tyr	Tyr	Cys		
				885					890						895		
Lys	Leu	Ser	Asp	Asn	Ala	Ile	Gln	Tyr	His	Glu	Ser	Leu	Cys	Ser	Leu		
			900					905					910				
His	Ser	Ser	Ile	Ser	Tyr	Ala	Asp	Tyr	Tyr	Thr	Ser	Arg	Asn	Asn	Asn		
		915					920					925					
Ser	Glu	Asp	Gly	Gly	Gly	Asn	Ser	Ser	Ser	Glu	Lys	Ser	Asn	Ala	Asp		
	930					935					940						
Val	Ala	Lys	Thr	Met	Ala	Ser	Phe	Tyr	Asp	Gln	Phe	Asp	Lys	Ser	Glu		
945					950					955					960		
Asp	Ser	Lys	Lys	Asn	Lys	Asn	Lys	Thr	Ser	Asn	Glu	Ile	Leu	Ile	Lys		
				965					970						975		
Met	Phe	Gln	Met	Asp	Arg	Val	Leu	Asp	Gly	Met	Asp	Asp	Asp	Asp	Asp		
			980					985					990				
Glu	Asp	Ser	Asp	Ser	Ser	Ser	Ser	Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu		
		995					1000						1005				
Glu	Glu	Ile	Val	Lys	Lys	Pro	Ala	Lys	Lys	Arg	Lys	Val	Glu	Asp	Val		
	1010					1015						1020					
Asp	Ser	Asn	Lys	Lys	Thr	Leu	Pro	Lys	Glu	Pro	Ala	Val	Lys	Lys	Val		
1025					1030					1035					1040		
Lys	Gln	Glu	Glu	Asp	Val	Glu	Met	Glu	Glu	Val	Lys	Glu	Ala	Ala	Ala		
				1045					1050						1055		
Glu	Glu	Glu	Lys	Lys	Glu	Glu	Gln	Glu	Ala	Lys	Glu	Glu	Asp	Ala	Thr		
			1060					1065					1070				
Glu	Tyr	Asp	Asp	Asp	Thr	Glu	Glu	Asp	Glu	Lys	Ala	Val	Ala	Ser	Asp		
	1075						1080						1085				
Glu	Asp	Glu	Asp	Asp	Glu	Asp	Ser	Lys	Ala	Ile	Phe						
	1090					1095											

<210> 44  
 <211> 618  
 <212> DNA  
 <213> SHRIMP

<400> 44  
 atggcaggaa tcggtagaag agataataga cccgtattac atctggacat tgatccaaat 60  
 aaggaaatac cctataacgt tccaccaacc cctattatct gtgaaaaaaaa ccccttcgtg 120  
 tttaacatgc agaagtgtct agactgtgct cctttccctc cctaccccg gactgagaag 180  
 cctttccctc cataccctgg tactgcagta gaagaggagg agaagcaaaa ggaaattgag 240  
 gagcttctgg ttgaccaatc tttccctccc ccattccctg gaaataagct gagagatc 300  
 cccagaacct accctctcga atttcccgag aagaaggaga aggatttccc ttgcgttgac 360  
 actaccggtc acagcgatat ccccttcacg gatctggaga aaaccccacc ccgtagtac 420  
 gttaggcacg gttaccacta cttaatcaac cccaacaagg ttggggagct taaccatc 480  
 gttggttaagc tcaactgaaa gcaagaaaac ctgaacaaat tggtgttgga tgttgatgac 540  
 gttgtgatta atctgtcaag cactttgaag gaacttgaga agctgcgagc tggcctgtgc 600  
 aagttctcaa aaaactag 618

<210> 45  
 <211> 205  
 <212> PRT  
 <213> SHRIMP

<400> 45  
 Met Ala Gly Ile Gly Arg Arg Asp Asn Arg Pro Val Leu His Leu Asp  
 1 5 10 15  
 Ile Asp Pro Asn Lys Glu Ile Pro Tyr Asn Val Pro Pro Thr Pro Ile  
 20 25 30

WO 01/38351

PCT/US00/28888

126

```

Ile Cys Glu Lys Asn Pro Phe Val Phe Asn Met Gln Lys Cys Ser Asp
      35              40              45
Cys Ala Pro Phe Pro Pro Tyr Pro Gly Thr Glu Lys Pro Phe Pro Pro
      50              55              60
Tyr Pro Gly Thr Ala Val Glu Glu Glu Glu Lys Gln Lys Glu Ile Glu
      65              70              75              80
Glu Leu Leu Val Asp Gln Ser Phe Pro Pro Phe Pro Gly Asn Lys
      85              90              95
Leu Arg Asp Ile Pro Arg Thr Tyr Pro Leu Glu Phe Pro Glu Lys Lys
      100             105             110
Glu Lys Asp Phe Pro Cys Val Asp Thr Thr Gly His Ser Asp Ile Pro
      115             120             125
Phe Ile Asp Leu Glu Lys Thr Pro Pro Arg Ser Asp Val Arg His Gly
      130             135             140
Tyr His Tyr Leu Ile Asn Pro Asn Lys Val Gly Glu Leu Asn His Ile
      145             150             155             160
Val Gly Lys Leu Thr Glu Lys Gln Glu Asn Leu Asn Lys Leu Val Leu
      165             170             175
Asp Val Asp Asp Val Val Ile Asn Leu Ser Ser Thr Leu Lys Glu Leu
      180             185             190
Glu Lys Leu Arg Ala Gly Leu Cys Lys Phe Ser Lys Asn
      195             200             205

```

<210> 46  
 <211> 630  
 <212> DNA  
 <213> SHRIMP

```

<400> 46
atggcctcat catcatcatc ccctgttgcc ctctcctctg tcgcatcatc cgtgatgatg 60
gaaagagatg aagaaaatac actgtccctc aggaacagga atgtgaacaa accaacacct 120
gttagcgccg cctgggtgcc tgttgatgaa gaggatgaag atagggagga aatgagaaga 180
cttgaagatt tttcttcaga tgaagaagac gatgataata aatcatgtca ttgtgaccat 240
agcgatgacg atgacgatga cgaggaggat ccttcatgct ttaagggttt ttcagctggc 300
ctgtgctctt ttgtgagggg tttctttggc ttccctcagga agtcacttac caagaaacag 360
gtgttccttc ttacaagcgc agccgttgct gctattttta agactagaga tgtggctaaa 420
actgaagaag gcgcagcaac catggaagaa aattcaacag atgtgattac tggaggagat 480
ggagatagtg gtattgctgc tgatgttgtc tctctcgcta gtgagggaga gggagaaaat 540
ggatctcttt tggaatctat tgcaacaaca ctcatacaaga ctacaattga aaatcttgta 600
gatggtggag aagaaaccac agaattgtaa
                                     630

```

<210> 47  
 <211> 207  
 <212> PRT  
 <213> SHRIMP

```

<400> 47
Met Ala Ser Ser Ser Ser Pro Val Ser Ser Val Ala Ser Ser Val
  1              5              10              15
Met Met Glu Arg Asp Glu Glu Asn Thr Leu Ser Leu Arg Asn Arg Asn
      20              25              30
Val Asn Lys Pro Thr Pro Val Ser Ala Ala Trp Val Pro Val Asp Glu
      35              40              45
Glu Asp Glu Asp Arg Glu Glu Met Arg Arg Leu Glu Asp Phe Ser Ser
      50              55              60
Asp Glu Glu Asp Asp Asp Asn Lys Ser Cys His Cys Asp His Ser Asp
      65              70              75              80
Asp Asp Asp Asp Asp Glu Glu Asp Pro Ser Cys Phe Lys Gly Phe Ser
      85              90              95
Ala Gly Leu Cys Ser Phe Val Arg Gly Phe Phe Gly Phe Leu Arg Lys

```

	100		105		110										
Ser	Leu	Thr	Lys	Lys	Gln	Val	Phe	Leu	Leu	Thr	Ser	Ala	Ala	Val	Ala
	115						120					125			
Ala	Ile	Phe	Lys	Thr	Arg	Asp	Val	Ala	Lys	Thr	Glu	Glu	Gly	Ala	Ala
	130						135					140			
Thr	Met	Glu	Glu	Asn	Ser	Thr	Asp	Val	Ile	Thr	Gly	Gly	Asp	Gly	Asp
	145					150					155				160
Ser	Gly	Ile	Ala	Ala	Asp	Val	Val	Ser	Leu	Ala	Ser	Glu	Gly	Glu	Gly
			165						170					175	
Glu	Asn	Gly	Ser	Leu	Leu	Glu	Ser	Ile	Ala	Thr	Thr	Leu	Ile	Lys	Thr
			180						185					190	
Thr	Ile	Glu	Asn	Leu	Val	Asp	Gly	Gly	Glu	Glu	Thr	Thr	Glu	Leu	
	195						200					205			

<210> 48  
 <211> 2685  
 <212> DNA  
 <213> SHRIMP

<400> 48  
 atgacgagac atggtgtgct tgttccaaaa ggccgttcta ggcatgttat cctaggaaat 60  
 gtgcactaca ctttctgtac tactgacaat aattgtgtca gtctagacat cgatttcaag 120  
 gacaatatca cagacccaaa cattcagtta ttgaacaaga aattgggttaa gaaaacagca 180  
 aagaaaataa agaaggaaga tgcacctgaa acaaaggaaa atagtgcga agacatatat 240  
 gccaccaagg aattcgaaca gacaataaaa ggtctacaga caaaaaaagg tgccaccgag 300  
 gaaaacgccca tcgcggccgc agctgccgct gccactgctg ctgcggtaga aaaggctatg 360  
 ctatcagaaa gtgaaggaaa atcaatggct atcaacagag ctagaatggt gctttctaag 420  
 cgagacacgt cccagaaaca gtccactgca ttgaagaaca gggaatcttt cttcagtgtt 480  
 ttgatatttg aaactggatc agtgatagtt gtccgggttc aagatccttc gcttcaaaaa 540  
 ttgtgtgtga ttaaaaccac gactgatatt gctgatattc tacagaaaaa catcagtgtg 600  
 gctaacgtgt ctatagtga tacagtgtcc acttttaata gattccactt gaactttatt 660  
 cgactcggga aattcttcga aagaaattgc atctcttaca gttataaccc agaaacgttc 720  
 cccggtatgt ttttcaagct gcgagtgcc gcaaagcctc tcttgccctg agagactata 780  
 ggggaatact acacaaagggt tgcaatgatg cgcgatagta aggatcccaa ttttaaaatg 840  
 tctgactggt tgaggataaa aactgcatta acattttaaag ttgggaaat tactgtgtctc 900  
 ggagaaggag agagtgggtg cgggtgatgt tctgtcgtat ccaaattact atttggttta 960  
 ttccattact ttatggacaa caacattaaa atgtcccca aagaagcaca aagagtcaga 1020  
 gaaaaatacg gcatcccgca tctagaatgg tacttgtaaa ttgacatggt gctccactcc 1080  
 taccggtacg tcaaacatc ggccgagcaa gtgaaaaggc cgatggtgga ccaacaacat 1140  
 atttctgaag tggataggac atactatgga acaaagaaca gtatggacgc tgccatgtct 1200  
 gcaaatttag tgccttcaaa agaagagagt atctccttca ttaaaaaaat aagatcacaa 1260  
 caactttttg gacatttgtg taaaccttca aaagaaacta ctcgacgtgc tatagacaca 1320  
 ctttctttcg atcctataaa ccaagacagg tgggtggaata aaaatgacca atattacggt 1380  
 aaagagagat gtgaccctgt ttctgttgca cgttttagtgt ctgtttctga aaatacaaac 1440  
 agtatgatga atagtgcgat ttcttgtcaa gggaaatggt ggctagatga aaacgaatac 1500  
 aaggataaac ttgatcatat tgtggatttg tgtacagaag aaatagtgga ggaatgtgaa 1560  
 tcaaagggtt ttattgcctc cccatttttg aggaagcacc agaaggaaaa aataccaacg 1620  
 ccttatgttt tttagcgag agcctgtaat caaaaaaatg gtaacaaaat gagtattaac 1680  
 aataatagta actatttgtc gggttcaagt agggcgaaga ggaatgcaa actacaggaa 1740  
 aaacaccgtg taacttttagc cagggtgaac acgatgatgg cgtcgtaccg atttttgaat 1800  
 aattacatct caacagacat tgcacctgat tttgccaagt tatttggtaa tgatgtatat 1860  
 agtttattac atttaatgac aaacttgcct aaatcccgtg gacatgtctt aacatacaac 1920  
 gaaagggcc tttcaagtaa tgaaagtaca tataaaacac ctggaaatgc atactttagt 1980  
 actctatttg aaaaatccat tataaataac caagaaactg ctaataaagg taacaataga 2040  
 aaacgtaaat ttcttcgaat cggacaagaa aagagctctt ttctgtgcaa cgcgtgtggt 2100  
 gtcaatttga acaagggtag tgatgaaatc ataaagggtt tttgtacaag ttgcgataca 2160  
 aatagtacca gttacataga gaatgcatta tctgacatta acagagacaa gaagattaaa 2220  
 cgttttaaag cagctgcaac ccatccgcca gtgaagcaag aattggtaga ttctttatcc 2280  
 tctcttcat ctccttcttc ttcttcttct cagacgtcta acaagaacaa tagatgcacc 2340  
 cctagtgtat ttatagatta tgtgtacaaa ttcactgacg aaacaacagg tgctccaaag 2400

```

gtgggcttag tgtttaaaat gtgtgatatt cttgcctcct tagcaagcag gagaggggatg 2460
gaagatcgtc ccacagccaa ctatagaacc tccttacatt cagctactca aaataaaacc 2520
aatttgaata aactattagt ttctgctatc aaggaaacag gagccactga aactgaagca 2580
cagatattca acaagattat tggtagttaa aagggaactat caattctctg tcaacttgtg 2640
gaaaggagga acaaagacaa taatgtcttc gactgatttg tctaa 2685

```

<210> 49  
 <211> 886  
 <212> PRT  
 <213> SHRIMP

<400> 49

Met	Thr	Arg	His	Gly	Val	Leu	Val	Pro	Lys	Gly	Arg	Ser	Arg	His	Val
1				5					10					15	
Ile	Leu	Gly	Asn	Val	Asp	Tyr	Thr	Phe	Cys	Thr	Thr	Asp	Asn	Asn	Cys
			20					25					30		
Val	Ser	Leu	Asp	Ile	Asp	Phe	Lys	Asp	Asn	Ile	Thr	Asp	Gln	Asn	Ile
		35					40					45			
Gln	Leu	Leu	Asn	Lys	Lys	Leu	Gly	Lys	Lys	Thr	Ala	Lys	Lys	Ile	Lys
		50					55				60				
Lys	Glu	Asp	Ala	Pro	Glu	Thr	Lys	Glu	Asn	Ser	Asp	Glu	Asp	Ile	Tyr
65					70				75					80	
Ala	Thr	Lys	Glu	Phe	Glu	Gln	Thr	Ile	Lys	Gly	Leu	Gln	Thr	Lys	Lys
				85					90					95	
Gly	Ala	Thr	Glu	Asn	Ala	Ile	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Thr
			100				105						110		
Ala	Ala	Ala	Val	Glu	Lys	Ala	Met	Leu	Ser	Glu	Ser	Glu	Gly	Lys	Ser
		115					120					125			
Met	Val	Ile	Asn	Arg	Ala	Arg	Met	Val	Leu	Ser	Lys	Arg	Asp	Thr	Ser
	130					135					140				
Gln	Lys	Gln	Phe	Thr	Ala	Leu	Lys	Asn	Arg	Glu	Ser	Phe	Phe	Ser	Val
145					150					155				160	
Leu	Ile	Phe	Glu	Thr	Gly	Ser	Val	Ile	Val	Val	Gly	Leu	Gln	Asp	Pro
			165						170					175	
Ser	Leu	Thr	Lys	Leu	Cys	Val	Ile	Lys	Ala	Thr	Thr	Asp	Ile	Ala	Asp
			180					185					190		
Ile	Leu	Gln	Lys	Asn	Ile	Ser	Val	Ala	Asn	Val	Ser	Ile	Val	Asn	Thr
		195					200					205			
Val	Ser	Thr	Phe	Asn	Arg	Phe	His	Leu	Asn	Phe	Ile	Arg	Leu	Gly	Lys
		210				215					220				
Phe	Phe	Glu	Arg	Asn	Cys	Ile	Ser	Tyr	Ser	Tyr	Asn	Pro	Glu	Thr	Phe
225					230					235				240	
Pro	Gly	Met	Phe	Phe	Lys	Leu	Arg	Val	Pro	Ala	Lys	Pro	Leu	Leu	Pro
				245					250					255	
Gly	Glu	Thr	Ile	Gly	Glu	Tyr	Tyr	Thr	Lys	Val	Ala	Met	Met	Arg	Asp
			260					265					270		
Ser	Lys	Asp	Pro	Asn	Phe	Lys	Met	Ser	Asp	Trp	Leu	Arg	Ile	Lys	Thr
		275					280					285			
Ala	Leu	Thr	Phe	Lys	Val	Gly	Lys	Ile	Thr	Val	Leu	Gly	Glu	Gly	Glu
		290				295					300				
Ser	Gly	Cys	Gly	Asp	Val	Ser	Val	Val	Ser	Lys	Leu	Leu	Phe	Gly	Leu
305					310					315				320	
Phe	His	Tyr	Phe	Met	Asp	Asn	Asn	Ile	Lys	Met	Ser	Pro	Lys	Glu	Ala
				325					330					335	
Gln	Arg	Val	Arg	Glu	Lys	Tyr	Gly	Ile	Pro	His	Leu	Glu	Trp	Tyr	Leu
			340					345					350		
Tyr	Ile	Asp	Met	Leu	Leu	His	Ser	Tyr	Pro	Tyr	Val	Lys	Pro	Ser	Ala
		355					360					365			
Glu	Gln	Val	Lys	Arg	Ala	Met	Val	Asp	Gln	Gln	His	Glu	Val	Asp	Arg
		370				375					380				
Thr	Tyr	Tyr	Gly	Thr	Lys	Asn	Ser	Met	Asp	Ala	Ala	Met	Ser	Ala	Asn

385					390					395					400
Leu	Val	Pro	Ser	Lys	Glu	Glu	Ser	Ile	Ser	Phe	Ile	Lys	Lys	Ile	Arg
				405					410					415	
Ser	Gln	Gln	Leu	Phe	Gly	His	Leu	Cys	Lys	Pro	Ser	Lys	Glu	Thr	Thr
			420					425					430		
Arg	Arg	Ala	Ile	Asp	Thr	Leu	Ser	Phe	Asp	Pro	Ile	Asn	Gln	Asp	Arg
		435					440					445			
Trp	Trp	Asn	Lys	Asn	Asp	Gln	Tyr	Tyr	Gly	Lys	Glu	Arg	Cys	Asp	Pro
	450					455					460				
Phe	Ser	Val	Ala	Arg	Leu	Val	Ser	Val	Ser	Glu	Asn	Thr	Asn	Ser	Met
465					470					475				480	
Met	Asn	Ser	Arg	Ile	Ser	Cys	Gln	Gly	Lys	Trp	Trp	Leu	Asp	Glu	Asn
				485					490					495	
Glu	Tyr	Lys	Asp	Lys	Leu	Asp	His	Ile	Val	Asp	Leu	Cys	Thr	Glu	Glu
			500					505					510		
Ile	Val	Glu	Glu	Cys	Glu	Ser	Lys	Gly	Phe	Ile	Asp	Phe	Leu	Arg	Lys
		515					520					525			
His	Gln	Lys	Glu	Lys	Ile	Pro	Thr	Pro	Tyr	Val	Leu	Leu	Ala	Arg	Ala
	530					535				540					
Cys	Asn	Gln	Lys	Asn	Gly	Asn	Lys	Met	Ser	Ile	Asn	Asn	Asn	Ser	Asn
545					550					555				560	
Tyr	Leu	Ser	Gly	Ser	Ser	Arg	Ala	Lys	Arg	Asn	Ala	Lys	Leu	Gln	Glu
			565						570					575	
Lys	His	Arg	Val	Thr	Leu	Ala	Arg	Leu	Asn	Thr	Met	Met	Ala	Ser	Tyr
			580					585					590		
Arg	Phe	Leu	Asn	Asn	Tyr	Ile	Ser	Thr	Asp	Ile	Ala	Pro	Asp	Phe	Ala
		595					600					605			
Lys	Leu	Phe	Gly	Asn	Asp	Val	Tyr	Ser	Leu	Leu	His	Leu	Met	Thr	Asn
	610					615					620				
Leu	Lys	Ser	Arg	Gly	His	Ala	Leu	Thr	Tyr	Asn	Glu	Arg	Ala	Leu	Ser
625					630					635				640	
Ser	Asn	Glu	Ser	Thr	Tyr	Lys	Thr	Pro	Gly	Asn	Ala	Tyr	Phe	Ser	Thr
				645					650					655	
Leu	Phe	Glu	Lys	Ser	Ile	Ile	Asn	Asn	Gln	Glu	Thr	Ala	Asn	Lys	Gly
			660					665					670		
Asn	Asn	Arg	Lys	Arg	Lys	Phe	Ser	Arg	Ile	Gly	Gln	Glu	Lys	Ser	Ser
		675				680						685			
Phe	Leu	Cys	Asn	Ala	Cys	Gly	Val	Asn	Leu	Asn	Lys	Gly	Ser	Asp	Glu
	690					695					700				
Ile	Ile	Lys	Gly	Ile	Cys	Thr	Ser	Cys	Asp	Gln	Asn	Ser	Thr	Ser	Tyr
705					710					715				720	
Ile	Glu	Asn	Ala	Leu	Ser	Asp	Ile	Asn	Arg	Asp	Lys	Lys	Ile	Lys	Arg
				725					730					735	
Phe	Lys	Ala	Ala	Ala	Thr	His	Pro	Pro	Val	Lys	Gln	Glu	Leu	Val	Asp
			740					745					750		
Ser	Leu	Ser	Ser	Ser	Ser	Ser	Pro	Ser	Ser	Ser	Ser	Ser	Gln	Thr	Ser
		755					760					765			
Asn	Lys	Asn	Asn	Arg	Cys	Thr	Pro	Ser	Asp	Phe	Ile	Asp	Tyr	Val	Tyr
	770					775					780				
Lys	Phe	Thr	Asp	Glu	Thr	Thr	Gly	Ala	Pro	Lys	Val	Gly	Leu	Val	Phe
785					790					795				800	
Lys	Met	Cys	Asp	Ile	Leu	Ala	Ser	Leu	Ala	Ser	Arg	Arg	Gly	Met	Glu
				805					810					815	
Asp	Arg	Pro	Thr	Ala	Asn	Tyr	Arg	Thr	Ser	Leu	His	Ser	Ala	Thr	Gln
			820					825					830		
Asn	Lys	Thr	Asn	Leu	Asn	Lys	Leu	Leu	Val	Ser	Ala	Ile	Lys	Glu	Thr
		835					840					845			
Gly	Ala	Thr	Glu	Thr	Glu	Ala	Gln	Ile	Phe	Asn	Lys	Ile	Ile	Gly	Ser
	850					855					860				
Glu	Lys	Gly	Leu	Ser	Ile	Leu	Cys	Gln	Leu	Val	Glu	Arg	Arg	Asn	Lys
865					870					875				880	

WO 01/38351

130

PCT/US00/28888

Asp Asn Asn Val Phe Asp  
885

<210> 50  
<211> 1268  
<212> DNA  
<213> SHRIMP

<400> 50  
atgtcttcga ctgatttgtc taagaatgcc ttccatgact ggggtggtatc aaagacagat 60  
tgtgaggtgt ttgatgtaca ctgtgagacg gacagagatt gtggcgctgc ttgcgagaac 120  
acgtactctg ttgacggaaa ggaggttaca aaattctctt gtaaccaaca gtcgggaaga 180  
tgtgccagga gtgtttatag tgcgtcttct ctagaaagag cagccaatga tcttgccac 240  
attataggta tcatcaagaa aaatccaaaa ttggaggaag aactccctga atcatttttg 300  
tggtttatca atcacaatgg aggagatttg tttgtgaata agcgagccgc gtactacgac 360  
acgatgcac taagcatagg gaaactggat aatgtggaca ctcttgccca gggtttagat 420  
aaacggatgg cctcatcatt gagagagcac ctactgagga agttggactc tatactttta 480  
caaattgata aagttaaata tgaaaaggca aagaaatgga tattggatat aacacaggag 540  
gctggcaccg aagaggacaa taaagaagaa gaagatgcga aaaaagagga tcaatctctt 600  
agcgttagtg aaattgtgga tgttttaacg ggcacacatg accctatgcc cctgagggct 660  
agagggttta tccagaaaaa aatatatcct ttgtcaagaa acgaattgag agaattagcc 720  
cttaaggaac ttttccctga agaaactaca tctctcagg ttttgagtag gcaacatgat 780  
gtatctacgc gtgaagattt atgcaatgaa agtatgaatg cagggagggc agaattccatt 840  
tttagcgacc ctgattctgg agagtacgtg gctacttgtg catgtcttta ctcggaatat 900  
ttaacagggc ctgctgtgaa gcacaaaaca tacaggtagg ttatagacta cgacaaatgg 960  
aaaaggactg gaagacctga atttctaact gatcctgtac ttcattttta aaaggcagaa 1020  
gctgtgtgta aatcgacaaa tccaaacttg agggcaattt atagtccaga taataaaggt 1080  
ttcttgtgtg cgctgtagc tgaacttgta aagacggcat taacttttag gggttcacac 1140  
gaaccgtctc tcattgtcga gagagatata aatcaagctg aaaatctacc atccaattca 1200  
tttggtgtaa actggcccta tgtgaatctc ctaaatcgca ttcaagacca gtacacgtaa 1260  
tttgataa 1268

<210> 51  
<211> 413  
<212> PRT  
<213> SHRIMP

<400> 51  
Met Ser Ser Thr Asp Leu Ser Lys Asn Ala Phe His Asp Trp Val Val  
1 5 10 15  
Ser Lys Thr Asp Cys Glu Val Phe Asp Val His Cys Glu Thr Asp Arg  
20 25 30  
Asp Cys Gly Ala Ala Cys Glu Asn Thr Tyr Ser Val Asp Gly Lys Glu  
35 40 45  
Val Thr Lys Phe Ser Cys Asn Gln Gln Ser Gly Arg Cys Ala Arg Ser  
50 55 60  
Val Tyr Ser Ala Ser Ser Leu Glu Arg Ala Ala Asn Asp Leu Gly His  
65 70 75 80  
Ile Ile Gly Ile Ile Lys Lys Asn Pro Lys Leu Glu Glu Glu Leu Pro  
85 90 95  
Glu Ser Phe Leu Trp Phe Ile Asn His Asn Gly Gly Asp Leu Phe Val  
100 105 110  
Asn Lys Arg Ala Ala Tyr Tyr Asp Thr Met His Leu Ser Ile Gly Lys  
115 120 125  
Leu Asp Asn Val Asp Thr Leu Ala Gln Gly Leu Asp Lys Arg Met Ala  
130 135 140  
Ser Ser Leu Arg Glu His Leu Leu Arg Lys Leu Asp Ser Ile Leu Leu  
145 150 155 160  
Gln Ile Asp Lys Val Lys Tyr Glu Lys Ala Lys Lys Trp Ile Leu Asp  
165 170 175

Ile Thr Gln Glu Ala Gly Thr Glu Glu Asp Asn Lys Glu Glu Glu Asp  
 180 185 190  
 Ala Lys Lys Glu Asp Gln Ser Leu Ser Val Ser Glu Ile Val Asp Val  
 195 200 205  
 Leu Thr Gly Thr His Asp Pro Met Pro Leu Arg Arg Phe Ile Gln Lys  
 210 215 220  
 Lys Ile Tyr Pro Leu Ser Arg Asn Glu Leu Arg Glu Leu Ala Leu Lys  
 225 230 235 240  
 Glu Leu Phe Pro Glu Glu Thr Thr Ser Pro Gln Val Leu Ser Arg Gln  
 245 250 255  
 His Asp Val Ser Thr Arg Glu Asp Leu Cys Asn Glu Ser Met Asn Ala  
 260 265 270  
 Gly Arg Ala Glu Ser Ile Phe Ser Asp Pro Asp Ser Gly Glu Tyr Val  
 275 280 285  
 Ala Thr Cys Ala Cys Lys Glu Tyr Leu Thr Gly Pro Ala Cys Lys His  
 290 295 300  
 Lys Tyr Tyr Val Ile Asp Tyr Asp Lys Trp Lys Arg Thr Gly Arg Pro  
 305 310 315 320  
 Glu Phe Leu Thr Asp Pro Val Leu His Phe Lys Lys Ala Glu Ala Val  
 325 330 335  
 Cys Lys Ser Thr Asn Pro Asn Leu Arg Ala Ile Tyr Ser Pro Asp Asn  
 340 345 350  
 Lys Gly Phe Leu Cys Ala Pro Val Ala Glu Leu Val Lys Thr Ala Leu  
 355 360 365  
 Thr Phe Arg Gly Ser His Glu Pro Ser Leu Ile Val Glu Arg Asp Ile  
 370 375 380  
 Asn Gln Ala Glu Asn Leu Pro Ser Asn Ser Phe Gly Val Asn Trp Pro  
 385 390 395 400  
 Tyr Val Asn Leu Leu Asn Arg Ile Gln Asp Gln Tyr Thr  
 405 410

<210> 52  
 <211> 1401  
 <212> DNA  
 <213> SHRIMP

<400> 52  
 atgtctgcat ctttaatat ggacgaatac ctcaagaaga ctgcttcagc cgttctggat 60  
 gtagctgact catttgagaa aatcaaggga gaaatccaat cacctgagga ggctgaggct 120  
 ctttctgttg ctctctatgg agcacctcca aaaccttcag cttcggctgt ggcctctatc 180  
 atcactggag aaagaacatc tttaaacgac aaatatctat cggataatgt cctattgaaa 240  
 atgtctgttg ctgcggttg acaagaaaaat aatcgcaaga gagccgacca ggcagctgat 300  
 gaaattagaa ccatcatgga agatattaca gggagtttgt ccggtgcgta caggcaatat 360  
 agcccgctcg aggaagaaaa taaggtgcat ataggcatca tgaataacaa aacgcctagc 420  
 attgtttgtg gatattatac aatggacaca tctatttctt ccgaacctct ttctctaaca 480  
 gattttcaaa accccactgt cattgccaat gtgactaagc ggatggagag cattttttca 540  
 aaggctgact ctgctagggtc tacaagattc gacgcttttg ttaatgggtg tgcgaataat 600  
 atggatataa agtcatcaat agattgggca aatatggtag aaaatgtgat caaattacca 660  
 gattctacac ctaacccttg ttcagttgac actattgtgt ccagagacgc aagtgtagtt 720  
 aaaacagcag ttaatgatat atacgcttct gttggaaaaat cttattgtcg tcctgcaaca 780  
 cagctaacct ttatgagcga gattgaaaaa ctgcgaaagg ctgcagttgt atgttttgag 840  
 gcaactcatgt ccgatactag ggagagggca ttcgtagagt tcctatttta cgttagcttt 900  
 aaggaagatg catcaaatca caattcaaaa ttgtttgttc agaataagct atcttccatg 960  
 tctggaaacc ccagacagcc cataaaattg gtacgccgtt ctgctgagga aacactattc 1020  
 gggctctgtt tcatgtttaa ggtaatgcct ccagaattca tgaactgtat atttaacttc 1080  
 cctaccattc cccattcaac acaataccat ggtctatatg gtacatgttt aacctctcta 1140  
 cttagaaaaat acggttcttc attcgaaaag tcctgggctc attttgagga aattttaagc 1200  
 gaaagagcca atgcagtga aaaatttggt gtaaacgata cgaggataga ttgtctagat 1260  
 gcagtagcaa atctcaccgg acctgtgtat gttctcattt tagatcttgt acgtactcta 1320  
 agtgcgcaga gatcgtgttc aactaaattt ctccgtgaaa ttaaggaaaa ctatctttttg 1380

WO 01/38351

PCT/US00/28888

132

tggaataggt ttgtgtcata a

1401

&lt;210&gt; 53

&lt;211&gt; 459

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (1)...(459)

&lt;223&gt; Xaa = Any Amino Acid

&lt;400&gt; 53

Met	Ser	Ala	Ser	Leu	Ile	Leu	Asp	Glu	Tyr	Leu	Lys	Lys	Thr	Ala	Ser
1				5					10					15	
Ala	Val	Leu	Asp	Val	Ala	Asp	Ser	Phe	Glu	Lys	Ile	Lys	Gly	Glu	Ile
		20						25					30		
Gln	Ser	Pro	Glu	Glu	Ala	Ala	Ala	Leu	Ser	Val	Tyr	Gly	Ala	Pro	Pro
		35					40					45			
Lys	Pro	Ser	Ala	Ser	Ala	Val	Ala	Ser	Ile	Ile	Thr	Gly	Glu	Arg	Thr
	50					55					60				
Ser	Leu	Asn	Asp	Lys	Tyr	Leu	Ser	Asp	Asn	Val	Leu	Leu	Lys	Met	Ser
65				70						75				80	
Val	Ala	Arg	Val	Gly	Gln	Glu	Asn	Asn	Arg	Lys	Arg	Ala	Asp	Gln	Ala
				85					90				95		
Ala	Asp	Glu	Ile	Arg	Thr	Ile	Met	Glu	Asp	Ile	Thr	Gly	Ser	Leu	Ser
			100					105					110		
Gly	Ala	Tyr	Arg	Gln	Tyr	Ser	Pro	Leu	Glu	Glu	Glu	Asn	Lys	Val	His
	115						120					125			
Ile	Gly	Ile	Met	Asn	Asn	Lys	Thr	Pro	Ser	Ile	Val	Cys	Gly	Tyr	Tyr
	130					135					140				
Thr	Met	Asp	Thr	Ser	Ile	Ser	Ser	Glu	Pro	Leu	Ser	Leu	Thr	Asp	Phe
145				150						155					160
Gln	Asn	Pro	Thr	Val	Ile	Ala	Asn	Val	Thr	Lys	Arg	Met	Glu	Ser	Ile
			165					170					175		
Phe	Ser	Lys	Val	Asp	Ser	Ala	Arg	Ser	Thr	Arg	Phe	Asp	Ala	Phe	Val
		180						185				190			
Asn	Gly	Val	Ala	Asn	Asn	Met	Asp	Ile	Lys	Ser	Ser	Ile	Asp	Trp	Ala
	195					200						205			
Asn	Met	Val	Glu	Asn	Val	Ile	Lys	Leu	Pro	Asp	Ser	Thr	Pro	Asn	Pro
	210				215						220				
Cys	Ser	Val	Asp	Thr	Ile	Val	Ser	Arg	Asp	Ala	Ser	Val	Val	Lys	Thr
225				230						235				240	
Ala	Val	Asn	Asp	Ile	Tyr	Ala	Ser	Val	Gly	Lys	Ser	Tyr	Cys	Arg	Pro
			245						250				255		
Ala	Thr	Gln	Leu	Thr	Phe	Met	Ser	Glu	Ile	Glu	Lys	Leu	Arg	Lys	Ala
		260						265					270		
Ala	Val	Val	Cys	Phe	Glu	Ala	Leu	Met	Ser	Asp	Thr	Arg	Glu	Arg	Ala
		275					280					285			
Phe	Val	Glu	Phe	Leu	Phe	Tyr	Val	Ser	Phe	Lys	Glu	Asp	Asn	Thr	Asn
	290					295					300				
Ser	Lys	Leu	Phe	Val	Gln	Asn	Lys	Leu	Ser	Ser	Met	Ser	Gly	Asn	Pro
305					310					315				320	
Arg	Gln	Pro	Ile	Lys	Leu	Val	Arg	Arg	Ser	Ala	Glu	Glu	Thr	Leu	Phe
			325						330				335		
Gly	Leu	Cys	Phe	Met	Phe	Lys	Val	Met	Pro	Pro	Glu	Phe	Met	Asn	Cys
		340						345				350			
Ile	Phe	Asn	Phe	Pro	Thr	Ile	Pro	His	Ser	Thr	Gln	Tyr	His	Gly	Gly
	355					360					365				
Thr	Cys	Leu	Thr	Pro	Leu	Leu	Arg	Lys	Tyr	Gly	Ser	Ser	Phe	Glu	Lys
	370					375					380				



WO 01/38351

PCT/US00/28888

133

Ser Trp Ala His Phe Glu Glu Ile Leu Ser Ala Asn Ala Val Lys Lys  
 385 390 395 400  
 Phe Gly Val Asn Asp Thr Arg Ile Asp Cys Leu Asp Ala Val Ala Asn  
 405 410 415  
 Leu Thr Gly Pro Val Tyr Val Leu Ile Leu Asp Leu Val Arg Thr Leu  
 420 425 430  
 Ser Ala Gln Arg Ser Cys Ser Thr Lys Phe Leu Arg Glu Ile Lys Glu  
 435 440 445  
 Asn Tyr Leu Leu Trp Asn Arg Phe Val Ser Xaa  
 450 455

<210> 54  
 <211> 819  
 <212> DNA  
 <213> SHRIMP

<400> 54  
 atggctcaga catcaaagat gggaactaac aagaggtggt ttgaggagga agtggaggaa 60  
 gaaaggcaac aacctttcac aaagaaatct aaatcggaac caccagttt tgaagacaag 120  
 agttcatcca catcttctaa gaagaagagc aaatccaata aacacaccaa gaccaaggaa 180  
 gaacaacttc tagaattcgt gaaggatctg gagcggagcg accccactgt tcctgatgag 240  
 aagggtcaagc aagaagttga agaaaagtcc cctgaagcta ttgctgaaat tttttcaatg 300  
 tttgggatcg ctcaagacag caagttcaag agccttcttc ccattgaacg cataaagagc 360  
 atcactacta aaattgttat cgatgcaatt aatcagcctg tgcgcaagat gttggttgac 420  
 cacctctatc attttaagga gatgcagaat gttgtggaga aatataagga cgatagcgac 480  
 gaaaaactga gcgtcattct taagagtaag aaatcccca aagaatttga cctctccttt 540  
 tccgattacg ttgatcgctt taacaggatt ctggttggtg taattaagag ggtggccgga 600  
 gctattgaaa gtaaggaatt gttgcagagt aacagcatga tcatgaacag tgttctgggt 660  
 actgttgtgt ccaacattcc ttacaacatg aagattaata tttgtgtgtt ttgactaac 720  
 tttatttgta catttgctaa tgatgatttg tacacattct ttagggatga tgagaaattt 780  
 gtaatgagtc aggtacaagc atacatttca aaggattag 819

<210> 55  
 <211> 272  
 <212> PRT  
 <213> SHRIMP

<400> 55  
 Met Ala Gln Thr Ser Lys Met Gly Thr Asn Lys Arg Cys Phe Glu Glu  
 1 5 10 15  
 Glu Val Glu Glu Arg Gln Gln Pro Phe Thr Lys Lys Ser Lys Ser  
 20 25 30  
 Glu Pro Pro Ser Phe Glu Asp Lys Ser Ser Ser Thr Ser Ser Lys Lys  
 35 40 45  
 Lys Ser Lys Ser Asn Lys His Thr Lys Thr Lys Glu Glu Gln Leu Leu  
 50 55 60  
 Glu Phe Val Lys Asp Leu Glu Arg Ser Asp Pro Thr Val Pro Asp Glu  
 65 70 75 80  
 Lys Val Lys Gln Glu Val Glu Glu Lys Ser Pro Glu Ala Ile Ala Glu  
 85 90 95  
 Ile Phe Ser Met Phe Gly Ile Ala Gln Asp Ser Lys Phe Lys Ser Leu  
 100 105 110  
 Leu Pro Ile Glu Arg Ile Lys Ser Ile Thr Thr Lys Ile Val Ile Asp  
 115 120 125  
 Ala Ile Asn Gln Pro Val Arg Lys Met Leu Val Asp His Leu Tyr His  
 130 135 140  
 Phe Lys Glu Met Gln Asn Val Val Glu Lys Tyr Lys Asp Asp Ser Asp  
 145 150 155 160  
 Glu Lys Leu Ser Val Ile Leu Lys Ser Lys Lys Ser Pro Lys Glu Phe  
 165 170 175

WO 01/38351

PCT/US00/28888

134

Asp Leu Ser Phe Ser Asp Tyr Val Asp Arg Leu Asn Arg Ile Leu Val  
 180 185 190  
 Gly Val Ile Lys Arg Val Ala Gly Ala Ile Glu Ser Lys Glu Leu Leu  
 195 200 205  
 Gln Ser Asn Ser Met Ile Met Asn Ser Val Leu Gly Thr Val Val Ser  
 210 215 220  
 Asn Ile Pro Tyr Asn Met Lys Ile Asn Ile Cys Val Phe Leu Thr Asn  
 225 230 235 240  
 Phe Ile Cys Thr Phe Ala Asn Asp Asp Leu Tyr Thr Phe Phe Arg Asp  
 245 250 255  
 Asp Glu Lys Phe Val Met Ser Gln Val Thr Arg Tyr Ile Ser Lys Asp  
 260 265 270

<210> 56  
 <211> 1398  
 <212> DNA  
 <213> SHRIMP

<400> 56  
 atggctgtag gggattatct ttctatgtcc tctgtagggg aagcaacgct cgtggggtttt 60  
 atgatttttaa attttataaa ctttgtcaca atattatctt taataatata tgccgtgaca 120  
 gacgttttata gaagatgcaa gcggccgtct accaatggat attctggttg tacaaccaat 180  
 gtggtttctt cgactttaca agaagctaata ctcgttacca ctgaaaaaga taaacctgtt 240  
 caatttggtta gaggttttagt ccccgaaaaa atgatggaaa aatatagatc ggacttgtct 300  
 cctaagaacg tgggggaata tattttacct tcagaaaaag aaacagacaa attgaaaagt 360  
 gattataaaaa agggtaagaa gggttggtctt ttaactgccc tgagtaatgg tcatgacagt 420  
 aacaagagga ttatagggcc aagggatctg attagtagag atgatgtgaa ggacaaaagt 480  
 tatgtcttta agagattgag caaagatccg ctcgtctact actcttctgc aacctctaaa 540  
 tacgttagaa aattttcccc ttccagagca aaaaaattca tgacatcaac acagttgggg 600  
 agtaagctcg tgtatcctca cctatacgg tatggtactg cttttgtact acccacggga 660  
 tacgtgatca acaaagcata cggaatggat aatgaggatc tacacacttg gaaccacccc 720  
 tcttcttctg tgctcgtccc agactctaata aatgatagat taacagtaga atgtgctaaa 780  
 acggacccaa cacatagaat cggcattctac ggctttggag ggtctgatga taatagacgt 840  
 gcaaaaagaag aagggttatgt agaaatggtt ttatgtaatt gtgacaacca caaggacttg 900  
 cttaaggctc ctctaattac agagtattct acaaatccaa ctgaaattca agtagatgtt 960  
 gctgcaaaac gtgttttatt ccttgcccct gggtccgagc ctgtaaaatc ttcccaagtg 1020  
 acatctgctg ctcatacaact agacggagct actggcgagc acgataattc ccatgagccc 1080  
 gtgaagctat cagatacggg tgactatgca gttggatcac ccattgtatt caagccagt 1140  
 tatggtacat ctttagtaaa tcttccagaa acaggatctc ctctggcatt gaactgcccc 1200  
 tgcaccgaca aggtgatgag aatatatcaa gtcaatcaaa agggagggat attatataga 1260  
 gatatggtgg ggtatcttaa cgccaaccct gtggaagctg catcactttc ttctcggac 1320  
 tcttcttcgt ggttgacaac tggttaacaaa atatcttctg ttacatgtga aggagaaaaa 1380  
 ataaagaaaa ttgtgtaa 1398

<210> 57  
 <211> 463  
 <212> PRT  
 <213> SHRIMP

<400> 57  
 Met Ala Val Gly Asp Tyr Leu Ser Met Ser Ser Val Gly Glu Ala Thr  
 1 5 10 15  
 Leu Val Gly Phe Met Ile Leu Asn Phe Ile Asn Phe Val Thr Ile Leu  
 20 25 30  
 Ser Leu Ile Ile Tyr Ala Val Thr Asp Val Tyr Arg Arg Cys Lys Arg  
 35 40 45  
 Pro Ser Thr Asn Gly Tyr Ser Gly Cys Thr Thr Asn Val Val Ser Ser  
 50 55 60  
 Thr Leu Gln Glu Ala Asn Leu Val Thr Thr Glu Lys Asp Lys Pro Val  
 65 70 75 80

WO 01/38351

PCT/US00/28888

135

Gln Phe Val Arg Gly Leu Val Pro Arg Lys Met Met Glu Lys Tyr Arg  
                   85                                  90                  95  
 Ser Asp Leu Ser Pro Lys Asn Val Gly Glu Tyr Ile Leu Pro Ser Glu  
                   100                                  105                  110  
 Lys Glu Thr Asp Lys Leu Lys Ser Asp Tyr Lys Lys Gly Lys Lys Val  
                   115                                  120                  125  
 Gly Leu Leu Thr Ala Leu Ser Asn Gly His Asp Ser Asn Lys Arg Ile  
                   130                                  135                  140  
 Ile Gly Pro Arg Asp Leu Ile Ser Arg Asp Asp Val Lys Asp Lys Ser  
                   145                                  150                  155                  160  
 Tyr Val Phe Lys Arg Leu Ser Lys Asp Pro Leu Val Tyr Tyr Ser Ser  
                   165                                  170                  175  
 Ala Thr Ser Lys Tyr Val Arg Lys Phe Ser Pro Phe Arg Ala Lys Lys  
                   180                                  185                  190  
 Phe Met Thr Ser Thr Gln Leu Gly Ser Lys Leu Val Tyr Pro His Pro  
                   195                                  200                  205  
 Ile Arg Tyr Gly Thr Ala Phe Val Leu Pro Thr Gly Tyr Val Ile Asn  
                   210                                  215                  220  
 Lys Ala Tyr Gly Met Asp Asn Glu Asp Leu His Thr Trp Asn Pro Pro  
                   225                                  230                  235                  240  
 Ser Ser Ser Val Leu Val Pro Asp Ser Asn Asn Asp Arg Leu Thr Val  
                   245                                  250                  255  
 Glu Cys Ala Lys Thr Asp Pro Thr Ile Gly Ile Tyr Gly Phe Gly Gly  
                   260                                  265                  270  
 Ser Asp Asp Asn Arg Arg Ala Lys Glu Glu Gly Tyr Val Glu Met Leu  
                   275                                  280                  285  
 Leu Cys Asn Cys Asp Asn His Lys Asp Leu Leu Lys Ala Pro Leu Ile  
                   290                                  295                  300  
 Thr Glu Tyr Ser Thr Asn Pro Thr Glu Ile Gln Val Asp Val Ala Ala  
                   305                                  310                  315                  320  
 Lys Arg Val Leu Phe Pro Ala Pro Gly Ser Glu Pro Val Lys Ser Ser  
                   325                                  330                  335  
 Gln Val Thr Ser Ala Ala His Gln Leu Asp Gly Ala Thr Gly Glu His  
                   340                                  345                  350  
 Asp Ile Ser His Glu Pro Val Lys Leu Ser Asp Thr Gly Asp Tyr Ala  
                   355                                  360                  365  
 Val Gly Ser Pro Ile Val Phe Lys Pro Val Tyr Gly Thr Ser Leu Val  
                   370                                  375                  380  
 Asn Leu Pro Glu Thr Gly Ser Pro Leu Ala Leu Asn Cys Pro Cys Thr  
                   385                                  390                  395                  400  
 Asp Lys Ala Asp Gly Ile Tyr Gln Val Asn Gln Lys Gly Gly Ile Leu  
                   405                                  410                  415  
 Tyr Arg Asp Met Val Gly Tyr Leu Asn Ala Asn Pro Val Glu Ala Ala  
                   420                                  425                  430  
 Ser Leu Ser Ser Ser Asp Ser Ser Ser Trp Leu Thr Thr Gly Asn Lys  
                   435                                  440                  445  
 Ile Ser Ser Val Thr Cys Glu Gly Glu Lys Ile Lys Lys Ile Val  
                   450                                  455                  460

&lt;210&gt; 58

&lt;211&gt; 2361

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 58

atggagtaca tggaagaagg agacatcgct gaaaggcgct cagaagggtgt cgactatatt 60  
 ctggacgaaa actctgcttg tgtagttaat gtgaagagta tccgtaacag gctcgggtgcc 120  
 atggacgccg aggaggcaca gtacgcacag gacatttccg cccaacttgt caccatatt 180  
 atccgtcttg cccactgctc cgaatccaac aagattaagg ataccattgc cagtattgcg 240  
 ggtcttttca tcaacaacat ctttgacaac aattcaacaa agaacaaact taaaacgtat 300

```

aatcaattca aggcagagtc acaaaacaag tctagcgttc tcaatatctt tggctctcta 360
gatcctctga gtatgctttc tagcttcatg ggttctgac cagcaaagag tggaggggaa 420
aatttgagca aatctttggg tgtgctcttt gaggtgcttc aaaattacaa cccttgcaag 480
attgacgata ttgtccttct ggaaatgtgc ccatccaagt gcgccgcctg caccggtctc 540
aaggaagcca tccgccagga acaaccocat gaagcaatgt tgttgttttt caaatgtatc 600
aaccataata ggttcaattt tggaagcgac ataaagtcag catacgcttc tgaaacatgc 660
atgagatact ctgaggacga acgcgcgagtc gttgtgcctc tgaggagtat cctcctcggc 720
tgcctcgaca gggatgatcc agctcatact ctttcctctt tcggggatac tatcgagtat 780
gctgattcag ataacgcttg ggtttcttcc ctgtttgag ccgtctctag aatgcctatg 840
gtagacagag ccgttattgc tcaacttttac gtgtacacaa tgctcagccg acataggcga 900
gtatctggag acagcttcaa gcagtttgtc tataccgtat ttgttcgtat gatttactct 960
gcgattgaaa ttttgttctg tgatactgaa aattcgtctg tagaatgtga tggaaagcac 1020
tttttagact atgttaatgc catggttaac gtatccgtgc tgggttctac gtttaacgta 1080
ctaaaagcct accgttcatg ggtggtggat caagcatccg tcgcaccggt tctagacatt 1140
atttcgagag gatggaagaa gaactacccc tcacctgacc acatcaagag ggtggcgtag 1200
gacatctctc aagtcaccaa tcatcttgca tcaccttcta gaatggtaa aggtaacaac 1260
aaggctagca acgttacatc tggcctggat agtatcaggt ctgttcgtca agcagaaaaa 1320
tatatcccg tttggaatact tgaaaaataaa gcagggtatg gtgtaataaa cattgccaag 1380
cacacatcga gccgtccagc aagagaacaa tccaacggaa ggaactttaa ttgcaacgct 1440
ttacacattc taccttcaat taagggctgt gaggcacttg gggcacaaaa ggggagcgca 1500
gatcaaaactg tcaatgtttt tgataatttt gtcgcatctc atatggatat tgccatgaaa 1560
aagcaggggt cggggaagat tcttggactg ctactagca tgattgacag gcaaggctctg 1620
actacttcat tccctagtag tgaagcggaa tacaagaaga gaatccatga tttcacaaga 1680
tacgtcatct tctcttcaac acccatcaac gacgaactag tcaattctcg ctgtattctt 1740
ccccattcta atgttctgaa ctcccctatc agcttgagaa atattgaccc agaatacgtc 1800
cccgacactc gattccactt tctgctcatg atgtggcagc ggccaaatat cgatgaacct 1860
aatctttctg ctctaactac aagtcagcta gaattgttgc ttagcaagaa ccaaaaatgg 1920
gacaaaactca ccaccagagc gttcttcaat atcgacagga tcaatttcca gatggcagac 1980
gctatcatta agaacgtttc tggaagcggc ttcctagatg ggagtaaac tgcctcttct 2040
tcttctcag cgcctaactt tttccaaatc ttcagtgggt ctgaatgcac tgcaaagcag 2100
ctccaaagta ttcgcaaatt cattggagaa tctatgcagc atgtacaaaa ggaatggagt 2160
agtgcagtaa acaatgggaa cagaggagta gaaaattatg acggactcaa tgctcagttc 2220
tctgaagaac tgttcgagct gctctacaaa ttgatcatcg aggaggatat gcggccatcc 2280
agcctgatcg cctcatctga attcttgagc aactacgtca acgccatgga tgaacttctt 2340
atcagagcta atgcttctta g 2361

```

<210> 59  
 <211> 778  
 <212> PRT  
 <213> SHRIMP

<400> 59  
 Met Glu Tyr Met Glu Gly Asp Ile Ala Glu Arg Arg Ser Glu Gly  
 1 5 10 15  
 Val Asp Tyr Ile Leu Asp Glu Asn Ser Ala Cys Val Val Asn Val Lys  
 20 25 30  
 Ser Ile Arg Asn Arg Leu Gly Ala Met Asp Ala Glu Glu Ala Gln Tyr  
 35 40 45  
 Ala Gln Asp Ile Ser Ala Gln Leu Val Thr His Ile Ile Arg Leu Ala  
 50 55 60  
 His Cys Ser Glu Ser Asn Lys Ile Lys Asp Thr Ile Ala Ser Ile Ala  
 65 70 75 80  
 Gly Leu Phe Ile Asn Asn Ile Phe Asp Asn Asn Ser Thr Lys Asn Lys  
 85 90 95  
 Leu Lys Thr Tyr Asn Gln Phe Lys Ala Glu Ser Gln Asn Lys Ser Ser  
 100 105 110  
 Val Leu Asn Ile Phe Gly Ser Leu Asp Pro Leu Ser Met Leu Ser Ser  
 115 120 125  
 Phe Met Gly Ser Asp Pro Ala Lys Ser Gly Gly Glu Asn Leu Asp Lys  
 130 135 140  
 Ser Leu Gly Val Leu Phe Glu Val Leu Gln Asn Tyr Asn Pro Cys Lys



Ala Phe Phe Asn Ile Asp Arg Ile Asn Phe Gln Met Ala Asp Ala Ile  
645 650 655  
Ile Lys Asn Val Ser Gly Ser Gly Phe Leu Asp Gly Ser Lys Thr Ala  
660 665 670  
Ser Ser Ser Ser Ser Ala Pro Asn Phe Phe Gln Ile Phe Ser Gly Ala  
675 680 685  
Glu Cys Thr Ala Lys Gln Leu Gln Ser Ile Arg Lys Phe Ile Gly Glu  
690 695 700  
Ser Met Gln His Val Gln Lys Glu Trp Ser Ser Ala Val Asn Asn Gly  
705 710 715 720  
Asn Arg Gly Val Glu Asn Tyr Asp Gln Ala Gln Phe Ser Glu Glu Leu  
725 730 735  
Phe Glu Leu Leu Tyr Lys Leu Ile Ile Glu Glu Asp Met Arg Pro Ser  
740 745 750  
Ser Leu Ile Ala Ser Ser Glu Phe Leu Ser Asn Tyr Val Asn Ala Met  
755 760 765  
Asp Glu Leu Leu Ile Arg Ala Asn Ala Ser  
770 775

&lt;210&gt; 60

&lt;211&gt; 18234

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 60

atggaccagt acccagaagt gagggatact cctcagacag aacaggaaca ggcgggcgcg 60  
caacaacaac aagcagcaac aacaacagct gccgtgctg ctgccgctgc tcctacgcag 120  
tacagtaaca ctgtttctgc agaaacttta tccgccattt ctgaagatgg aaaattggag 180  
aggtcaatcg cagcttcgtg ctggatcaat aaccttaacc ctgatgaaaa aatggctcaa 240  
cgtgtccaat tccatccact tagttccacg accacatacg attcagaaaa tgtgaaccct 300  
ggtagttctg ttgtgttttt gaagcctaga gccctcccca ccgggggcac gtgttttagcc 360  
cccaactaca ttgcagtgcc tactcttcgt gctgcgtcag aaattatcga ttctattgca 420  
tcaactagtc tataccaatg ttcaatgttc aattcgtgga atcttattcc catttttatg 480  
agtaatagca aacatagtc attcgggtgat cgtgtcatca agagatcaat gatccgtaat 540  
tgttttttcca aacaaaaaaaa tgtagaaaat cttttaaagg aattgcgcag gagaaagggt 600  
aacgccgcca aggcattttc tcatgcagtt caacagaaat cagcagtaaa tactgccctt 660  
gcagcatgga acgcgggaag tgctgcaaac ctcgaaaaat tagtagattt ttgcaaatgt 720  
aagtacagtc ccgatagaaa atacaaagca ggaggtcttt ttagtgctgc agcaacaggt 780  
cagtcacaat caggtacttc ttcttctcct gttgaacata cttctaataga ttcttactc 840  
gatatacctaa aacgctcaca gggaaacgtcc cttgatttag attcagcaac aaacacattt 900  
gatactgctc tttctaggggt ttttaccgag ttttaaggaa aggctagagc agccgtagat 960  
gcagccgcag attcagatca cctatccgcg tcggacccta ttttctctat tgttcgacac 1020  
aatagcaggc gtgaggtgat tctagattca gtgccaaata tcggtatgtt ggctccacga 1080  
tcaaaatatt ctgtcgcaga gtacttgatg gcagacagag acgagtctgc agatatcgct 1140  
gctaagatag ggacaaagat tgcaacagat tttgaagcat tgagaggaga taataataag 1200  
agaagagcag atacttcagt cgatgatctc aaagaatcac tagcggattc tattgaaaaa 1260  
acttccatta aaaataccgg cgatattaat tcggtcacaa atattccac agatacagag 1320  
gagtatgaat tttctctcca catcacacag cttttcgcgc aggcattttt ggaaactatg 1380  
ggaagtttat tgagctgtgc tttcgggtga cagttcccct tctcagatga aggttttgcc 1440  
gctatcgaaa ggattatacg taaaacagat cctgatactg gaaaggtttc agaaatggac 1500  
ccttctctc tttcagatca atatctcttg ttggtaggaa atttccaggt ttctcccttc 1560  
cacgtttcag atcctaagga tatcgttttc ggtagacaag ttacgcctaa tacgcctatt 1620  
ttgagtatca ttactagatc taaaaatgat aagaatgaaa cgtctactat tattaatttc 1680  
agggataggc ttcttggttaa cgataccgtg ttgagagacg ccacgcaaaa cgtctcaact 1740  
tccaccctt ctcaaagaag agtccccacc gccgcaggtg aaccaaaaaa gccaatgctc 1800  
tctggttgcc tacctatcat caggggaccc caggtagtga ccagggaaaag tgatgatag 1860  
attagtggtc ttgtgggtga ttggtatata tctttggggg tctattatgc catgggttca 1920  
tcggctgcag ctattgccgc tggccaccag agagctctcg cttcagccga gtcaattaat 1980  
tcacccatga tgaaaaaatt ctcaaagaag ggaggaaagt atacagagga ggaaaagcga 2040  
atcaagaagg ctatgcgtag gaatgcagat cgttctgcta ggattttggc tttgttgggg 2100

caaactgatg	cccagtatgg	gtatgtcgaa	cataattcta	ccctagattc	gttctggtct	2160
tcgaatgccg	ctattcgtgc	aaaggcaaaag	gaggatgctc	ttagccgtgc	agaaatcttg	2220
gcagtttagga	aacaattgga	cggaaaatgt	tcctcttcaa	gggatgaata	ttccatggta	2280
gagagatata	ttagagactc	atttttcagg	tcagttaata	ggtcaggagg	aggatatgaa	2340
atgtttgatc	aaggttttga	tatgggaaga	tttgccgact	ttttgagtga	caactctgct	2400
gccaggaacg	cttggaaca	gtacgcagaa	gtaatgagag	gactttctaa	gcatgagaaa	2460
cgcgtattca	acattgaagg	tcttttcagt	gctctaaatt	ctttcaagtt	cccccttgtt	2520
ccagaacagg	ggcgtaaaaa	gactgtaggt	ggaaggcata	ggcttaacaa	tttgaaggcg	2580
gccaaataaga	tcattaacgg	catcacagag	atgactctcc	agtcagccat	cgatggtact	2640
ggaatctctg	atattattgg	ttcagtttagc	gatgggtggg	gaaatactac	agctcagccg	2700
tctcgcgtca	aagctcttaa	aacattgtcc	aatttcagcg	gaaacggaaa	tgttgtgtca	2760
attccagtta	gtcagagcagt	aaagtgtgcc	gcgggaagtc	gaggtgggga	aactctcaag	2820
tgtgtggaca	ttccttcagt	cattattgca	aacctaatct	ctgataagag	aattctagat	2880
caactttgcg	gaggagggat	gaacctgcct	cacgaaatca	caaactttat	cgagacgatt	2940
gcaggtaaaag	aacatacagg	aaaggaatcc	gttttcttgt	ctcctagatt	gtctgtcatt	3000
cttttgcggt	atatttggtt	caacgcagcg	gttgtttccc	ttacggatag	caacattaaa	3060
atgcccctca	acacaatgtc	cgagggcact	ggcgatgaca	tttataggga	ctatttgggc	3120
atcagaggca	tggttaataa	ttacaacagt	agtctctcct	ctatttcagt	caaggctatt	3180
tcggatagg	acaattgcgg	tagtggaat	acttcaacca	gtaataagaa	tgtgaccatt	3240
aagactcaag	gtgaattggt	aactgtcctt	caacagactg	ctaattgcctt	gtccgccttt	3300
accaacaagg	gaggcgtggg	tgcaaccccc	gatgctgcc	atatggccaa	cgttatttcc	3360
ccaattgcta	atgcggatgt	agttaagaac	accaacgtgg	ttgtttcagg	gctagatagg	3420
atcactgaga	ccatcaactt	cttttcattt	ttgtctcaga	tcaaaacaat	gaacgagaac	3480
attgaagagt	atcttaggag	atataggcta	ggagaaggac	tagataagaa	agaattggat	3540
aattttgtgt	atccaaatat	tgcagctatt	gttaagcgag	aattgggggt	aagtggttcc	3600
gcattgtcca	gtaattctga	tactgatcgt	ccaattacta	tcgacctgaa	cactgaacag	3660
cctttgatcg	taaaggctag	caagggttat	gcctctaacc	gctacgctaa	attattcaac	3720
aaaacaacaa	gaacagcagc	agaacaagct	cagatggagc	agtataatgc	acaaatggct	3780
gccaaatacta	ttcctcaatt	agtaaacagg	ttgaccatcc	ctggatccat	cacggcagac	3840
actgccatca	atgtcgttaa	agctttcaca	gaaaatggag	aatttagtaa	cgcagaaaca	3900
cacttggggg	ttatgggtaa	cgcgattaat	gaaatgcaac	ctcttttcac	ggacggattc	3960
aacgttgcga	acaagcgttt	aacagttaac	gtgggttcag	ttagtaagct	gattcagaat	4020
gggttaaccg	tatctctcat	tcttgctcac	tcaaaggcta	gcccctatgt	ctttaagcct	4080
ctcgtgcaag	atctcgctaa	gcttttactg	gcagtcactg	cagagacttc	tctggttgct	4140
tctaggtccc	agaagagttt	cttccccatt	cctccttcag	tattttcttc	aggtgggtct	4200
ttcaaaattg	atagggaaat	gttcgataat	atgaagacag	attatgtagt	ggaagtaatt	4260
agacagctat	ctaagaatgc	taccgcgcgc	atcgaaagg	gcaatgattc	cgattcagct	4320
gctaggattg	ccaagtccag	tgaaatttat	aacaaggatg	ttgcatcaac	cactgcagct	4380
cccggaactt	cttctccgc	tttaaccttg	ttcgccaata	atctccagaa	ccctgcaaa	4440
gtatgggtcta	tgggagctct	ccccatttc	gatatggccg	tggtagcaaa	acttcatggc	4500
atctctcacg	atcaaatgtt	cgcctatct	acatattatc	agggtattca	taagatggaa	4560
cttaacagcg	attgcaaacc	agaagaatgg	gataattctc	ttcctggaaa	tagggctagc	4620
aaattctttg	gcctttcttc	ggtgagcgat	aacaaccgtt	cattcaattt	ggcattggat	4680
actcttttgg	cttcaacctgc	agagatttgc	gatctgggtga	cgagggaaat	ggtaaagacc	4740
agtaacgata	ttgtgcataa	tattggatcg	aattccaaca	cggacgcgct	tcaaaagagc	4800
cttcaagttg	gtgcctcagc	agtagaaaaa	tacgacgagt	ctactctttc	tactaaagaa	4860
actgacgtat	attcccttgt	ttctgtctctg	gctaagagca	aatctcctct	atcttcttcc	4920
tcactctttgt	cgtctgaggg	acatctcacc	tctaaggaga	ttgataggac	atggaacacc	4980
cccgctcttc	tcggtaccgc	taaaactaca	tcttattctg	tttctgaaga	cgctctcaat	5040
gctcctcttt	cagccgtgtt	ggacttttaga	aggaatgttg	tggatgctac	taaactctctg	5100
tacgaagttg	cagctgtttg	tagtgtcatg	agtaaagagg	aggatgtgcg	ttcttcgagt	5160
agaaagatta	tgggaatggt	ggaacaagaa	tcgcccgtta	tgcaagacat	tggcattgac	5220
cgcattgcta	gtcttgttag	tacagttgct	acccccaaac	agcatcgcag	attcttacag	5280
acagtaaacc	attacaaaaa	ttatctcatt	agaaaagttg	catcgaatcc	ccttctctct	5340
tcaagattgg	gaggaatatc	ccctactagt	ggtaaacaccg	attacaacct	taaagctgta	5400
tatgatgggt	ttgtttcttc	ctcatcatca	atgacccct	cgtccatgtc	tgtctctgac	5460
agattctggt	cgggagtatt	ttctcagtgc	ctagagactg	gcccttcaat	gtttgccgat	5520
gctgggtcatg	gaggtagtaa	catgttccaa	atcactgcac	ctaaacttta	cggttctaga	5580
gtcaacacct	acgcagctct	gagctctggc	gttgagcggc	tgagagactc	tatttcttct	5640
gcgactcagg	aaagaaagaa	taggattgca	aagagcatcg	aagctctgga	aacgttcgta	5700
accgatgtgg	tggggggaga	tactttggat	caattgcgta	aggcccagaa	catgtacaac	5760

aaactgtcag	atattacttc	caactctatc	tatagtgatt	tcggaaacat	tgactgcgct	5820
aaaatcatga	agaatgtgac	gagcaagaaa	atgaccgcta	gacaacaatc	agatactatt	5880
cttagctctc	tcttgacaga	actcgctggc	ctggtagaca	aacaacaacc	tcaattggct	5940
actcaatttg	ctctggcgag	ccatgttatc	aaggcaaagt	atgtcactaa	tgacctcaat	6000
aatatccacg	agaaggaaac	attcagtcac	ttgatggccg	tgcccggtgt	tgccgattac	6060
tataatgtgt	cggcagctgc	catgtgtcag	cgtctagttg	cttccgacgt	aacaatgttc	6120
ctcggcggaa	ccatgtctca	acaaggcctg	ttcgtttcat	tccttcttaa	caacgtactt	6180
ttctcccagg	tttctgataa	tattaaaatg	aacgaattga	acgatgaaac	aaagtctctt	6240
ttggttaaac	tggttaggatt	ttgcggtaca	gtttcagatg	cgctaggatc	taggcacgtg	6300
tcttcaatta	gacgtgtaca	gaacgaagag	gataagaaat	tagacaggag	ttttgttaca	6360
tcactttatt	cagcatacag	agatttgagg	aagaagactg	aactatacag	ggaaactgat	6420
actattaaca	aacttttcgg	acatcaaaac	tttatgtctt	acgaatcttc	catgctcaag	6480
aggacttctt	tggtacatga	cgctgtttcc	ggccctaggc	caagaaggta	cagcaccctt	6540
gaggatgtac	ttgaggctcc	ttccacgggt	cacaaatcgt	tcattggttt	ttaccagagc	6600
agggcagctg	cttctaggcg	agtgaagagg	gctggactca	gggctctggc	tgataacagg	6660
atggaatctc	tttacgggga	agaagtcttg	aacgatatga	ggtcttcggc	ggtctcttcc	6720
gaaatgatgg	atatagagta	tggtgagggg	ggattcatga	tgatgattag	tgatgatgag	6780
gatgatattg	cctttattga	ttccgaagaa	gagtctgaat	catctactga	tttctcctca	6840
tcagatgaat	attccgattc	atccgatgat	tatgattttg	atgatgataa	taatggccag	6900
tctccttatt	caactacatc	ttattcgtat	gatgctctag	accgtctgaa	ttctgccgct	6960
aagcctctta	ctgccatcta	cgggtgcagg	ggagaagggtg	aagacgatga	ggaaaatgac	7020
ctctatgaag	aagaacaaga	aaggaggaga	cgctcgctcat	caaagatggg	gaagatcctt	7080
agagatcttc	atgagagtga	tgatgacgac	gatgactact	ttgatgacga	atgtgatggc	7140
gaacgttcaa	tgtcagaaac	tattgcaacc	agaagagctg	gccgtattca	atatggtcca	7200
ggtttcctat	ctcattctaa	tattcttaac	cgctcgggcta	aagcacgcgc	tttcttgaca	7260
cgaggcaaga	aattcaggcc	ttctgcgtac	gatgatttct	ttatggagga	tgacgattcc	7320
ctcctcttct	ctgacgaatc	taccacttct	tcttctctct	ccgattctcc	attctcctcc	7380
ttcagcaagg	ggagaaaatg	caagcgccga	acaagcgagg	accaatgtgc	ctttgttaag	7440
agagttgtac	gtgcttttgt	gcccaccaga	gtaacaatga	tcaatggtcg	agttagcatg	7500
atcacccag	tgactagtga	aaatacagta	ggattctatg	aaaattacca	gaaggccaac	7560
aagagggaag	gggcgcgtct	gatcgaagaa	tacaaaattg	ttaagggtgc	ttcagctacc	7620
tgtcccagac	aatacgtaga	gggtagagca	tcaaaacaag	tgtctcccag	ggaactgagt	7680
aggctcttta	tcaaggcagc	tgcttatgtt	gcccgcaccc	aagaaagtaa	cttgaatatt	7740
atctttgacg	ctctcaccac	aacatcaaac	gccactctag	ttaatgaccc	atctactctt	7800
ttgggtgata	cacttttgtt	cgccaaacaa	ctagaggcaa	ttaccgagag	gaggaatagg	7860
ctaatagaag	acctaactga	aatctctcct	tcacttttca	catcattcgg	tgatgcaagt	7920
aaagacaccc	aaatgatggc	cgatgccaaa	cagatcgttt	caggaggaaa	tttcaagtct	7980
gccggtctat	taggtgtccc	tctcagaact	cttgcttcat	gtattaaggg	cactaaatac	8040
gttgatcgtc	ttttggctac	caaaaataag	aaccatctcg	aatggatgac	cacagccgct	8100
attgtttttg	cacgttcatt	caacgatact	actttccatg	cactcgaaga	tacactaaaa	8160
atgacctccg	ctttgacaga	catgtacagc	gctttcacca	acctcgtcgg	atcggaacat	8220
tctcagcgtc	taaaagtaaa	gagtactctt	ttagattcta	ttttcaacac	taggatggct	8280
cacactgaag	cagtcatggg	tctcgtatac	cctacagcgt	tcatacaacca	tgaaatggcc	8340
tctgattaca	cacagcgag	agagatgcaa	tcactcgctc	ttaacattct	taggggagtt	8400
aattgtagcc	aattgccacg	aaaggatatt	ggagacactg	ctggcctgtt	gacctttatt	8460
acatcacgta	aatttgacgg	ttatggagga	gaaaggggag	gtttgtctct	atacagaatg	8520
tccattgttg	atgctctttc	ttgcccctct	gacaatcggc	tcaagggagc	agtctctcta	8580
gaggtaggaa	agtggcagga	tatgggagag	gaaatcttct	acaagaggag	caacgatctg	8640
gtcgtatttt	gttcaaagaa	caatatctct	ctggaaaatg	ccgtaggtcc	tattgctagg	8700
tttgttccca	atggaactaa	catggctgat	attggcatga	ccgatattcat	ttctagaaca	8760
gtcaaggatg	acgcttcaat	gatcaggctt	aggcgcgag	aagagggcgc	tgccgagca	8820
ggaaaattca	ttacagcctc	agccatgggt	aatttgtacg	gaggtattga	taccgttgtg	8880
aacctaactg	aaaaactata	cgactcgctc	gttctgctcc	aagattcaga	ctcgttcaat	8940
acaccaacag	aaatggccac	tgctattatc	aaccgtatga	agtcgaggaa	acataaggct	9000
ctcaaaacac	cattcggggg	agatattgac	acctataaga	acttcccatc	ctcctctgaa	9060
gcaattgtag	ttagagccaa	ggaaatgcgt	aaccttatta	gcactatcgt	gatggacatt	9120
tccaagtcaa	ggggaatcaa	ctcgttctca	tccgcagtg	gttctacttt	ggccaagatt	9180
tccacatctg	aatttgaaag	gatactagaa	acatctgctg	ttctttcaaa	tacaaaggcc	9240
aatctgagaa	ccattgagaa	tagactcgcc	gaacactaca	acaaactaaa	acaattcagc	9300
catattagta	atgatggact	ttccgagaca	cgcgagctcg	ttgccgtaat	tgctgaatct	9360
ttaacccccg	tgtatgcgga	tgacaccagc	gagagaggag	catctgttag	tgaactattg	9420



acagacaata	ctctcctcaa	atattattggt	caaaatgaac	tgaaaaaacat	tgaagaggca	9480
aaacgtcacg	tgaccgccgc	aattgaaggt	tcatcccaac	tgacagaaaa	aatgttgagc	9540
ctgctcgttg	cctcagccga	catcaaccgt	atgtccgccc	aaaataacct	cgaatgtaag	9600
aaattgactg	aaggaaatag	taactttgta	ccaatgacta	acgaccaagg	tggtacattc	9660
ataaagcaca	aagaaacagg	tatctggctg	aagaccgatg	aagaaaaata	caccagttct	9720
atcaaggaca	atgatcagcg	tagagtagct	aaaaccatcc	tcgcaattgt	agaggacaat	9780
agaaatgcaa	ccatccggtc	tcgtctacag	tctctttgct	ttggaaaaata	tgccatgaac	9840
gacatttttg	cacttgatga	tgccgatatt	aagaatatgg	acaaactcat	tgaaaaacta	9900
ggcgaagcac	tcgcagagaa	ggcatctcct	tctagctcgg	ccattttctc	ttcctcatca	9960
tctaacacaa	catcctcctc	ttcttctccc	agttcttccc	catcatcatc	atcttctctc	10020
ttctcaatgg	actattcaaa	caaccttgcc	aaaactatcc	cctacatgcc	tatcgtcttc	10080
caaaacaaac	aatctaattg	caattcttct	gacgcatcat	cctcatcacc	atcatcatct	10140
tcttcttcat	ctgccaatat	tgataatggt	gagcacaata	aagtggctct	ccaacaactt	10200
caaacacaag	aatctaacga	tttgagtaac	gtactttctg	ttaccaccaa	gcacagatct	10260
gcgtctcata	atcaagctgc	aactgttggc	atcttcaacg	gaaggcaaca	cgcagagaca	10320
gttgttgcta	taccaaagtc	aaacaaggct	aataataatg	ccaccgttct	cgcaggccaa	10380
ggaattctta	cccgttcttc	agcccctgaa	aatgtttcct	ccaccagcat	gcaattgcct	10440
ccatcatcat	catcatcatc	aaatggagat	gataataagg	taccagtaac	tgtcaggctt	10500
aaccagtacg	ccaactcaat	cttatcatct	attgaaaaacg	catcagaatt	taaggacttg	10560
aagggaagcag	aaaggaaaat	cgatctggcc	atccaggcag	cttccaccac	agaaacaaag	10620
gaaatggtca	ccgtgtctaa	gtgcccctct	gctaaccaga	ctgccatcac	tgccatctct	10680
caagctaaat	cccttaagaa	aagtgccttc	gaattattgg	aaagagtta	caaggcagtc	10740
gaggtttaca	ccccagattc	atctattgca	gccgtttctc	ttcccgttaa	tgagagattct	10800
atggtttctt	cttctcggg	atcaggatct	gtcctctctt	catcatcctc	ctcctcatcc	10860
tcattctctt	cctctaattg	gacagactat	ttcaactatg	cttacggaaa	attgaagaac	10920
attgatgaaa	atactgaaga	aggggcagaa	actgtccaga	aaaacatggt	cgaacaagat	10980
gctgccgttc	gcatccctct	tctagtatca	tatgtccat	tcagcgaaat	gatgagacgt	11040
gctattgaca	agttgaacga	atactacca	ctgattgatg	ccatcaaaac	aaagatcgtg	11100
tcagacacta	aacaggcttc	ctcatgggcc	atcaaggaaa	cggacaagga	gcttgatatg	11160
gacaaagaac	aggtgatttc	aaagattaat	aacttgcaac	aaaacttttc	aaacgaatca	11220
gacaagataa	agatggctat	tagtgttttg	gacaacaaaa	ggaacgaatt	agagcttcag	11280
aacaacaaaa	ctaggagctt	tattgaaact	acaaagagcc	gtatcgaggc	tggtggagga	11340
gatgtagcaa	acttcaagga	gattatcgat	tacgaaaaca	catctgaaaa	tgacaacaat	11400
ctcttccaga	gcctgaaagc	attcgctgct	gataactcgg	ggacagtta	cacccccact	11460
gacatgagca	atggaagaga	cacaaaatca	gacagtaaat	ttgtcgacat	gtacaacaaa	11520
cagattctcg	agggagggaat	caaactcatc	aatgaggggac	aaaatactgt	aaaggtagac	11580
ttttcaaagg	ctttggaggc	tttccctaga	caatccaacg	gtgcttcaga	gcctgtatct	11640
tcttcagttg	tggagaggag	acagcgagaa	cgtcttcagg	ctgtcgagat	gtttatggca	11700
ataatgatgg	agcgcaccga	gagtcctgag	aagagggttg	cagattcggc	tgctcagtg	11760
aatactgtta	ataatgtaga	agaaactgtt	aatagtggta	tggttaacat	caagagtga	11820
aggctcacag	agattaggaa	tcaagcaca	atcgctgaaa	gcactgcact	aaactccatc	11880
aacgacgaga	ttgtagagtc	tcctctcacc	ctctcttttg	gagcacgagt	cgaccagctc	11940
ttgatcaagg	tagatagagt	aggaagtatc	caacagcagc	aacagcaaca	gcagcaacag	12000
cagcagcttc	ccaaattgac	agctacagaa	cagagaaagg	aacaacaata	cgctgcagat	12060
aggggtgttt	acgatccttc	atacacctgc	ttcctgcaac	ctcttcacga	gacaattaaa	12120
cgtatttctt	ctgtctataa	ttcaaagaac	aagggtcctc	tcagtaacac	acgtggtgtt	12180
cccactagcg	atgccgactt	gcaactgatg	accatcactg	acttgtctag	gtctgtactc	12240
gactcttctt	ccacttcttc	caagaaaatg	ctgtacgaaa	atgttccctc	atcaattggt	12300
cactgcactct	gccgaatgat	cgcaatgatg	atcaccaacg	tccacgaagc	cactcatact	12360
tctcctcatt	cattcaattt	cgagaacaaa	agatccctga	agcagctgac	agaaatgttg	12420
aacgctgcca	cttcatccag	tgacggtcct	gccgtgagac	acgatgtact	aacaatgtta	12480
gagtccaaca	atggttacgt	caaagatttt	ggattcactc	accgcaaaaa	ggttgctgtg	12540
atcacccctg	ttaatacact	tctgggaggt	actttcagtg	gaaatgttgc	acctaatact	12600
gttatccttc	ctacttctga	gttgtttaac	tgcccaggag	ttgaaaatga	caaatttaga	12660
tccatggtta	acaggacaac	cgacaagaat	gtggctgacg	cacccaagtc	atctgcaagc	12720
atcgtggaga	ctcttgctcg	cacgtctccc	aacgcccagc	acctttactt	cccttcaag	12780
gaccagaggc	gacacttcaa	ctccatcacc	gacgccatca	tttctggtat	gagcggcgaa	12840
tcttcatctc	aattgaacac	tacttgtgat	caaaatctgg	taaacattga	tcaaactact	12900
ggcttcccag	tgtttacagg	aagaaagcag	ggcgaagaaa	ggattgtgca	cactgaaaac	12960
actatggaag	gagctcgcaa	ggacaagaac	agtggcattc	cttcatgtac	aaaggaccgt	13020
caaacttata	tcgatatggg	cacaaaattc	atggttgctc	caggctctct	tctgaatgct	13080

aacaaggaag	aaactctccg	tctaacacagg	ctttcagaca	ttaacaacgt	gagacattat	13140
ggcactgatg	ttcatgtggc	agggcgcaaac	tctgcatgga	gaattggtga	ggtggtgaga	13200
gccgcctcct	cattccctga	cggagataag	gaatcggcta	tgaaaaagat	gcttcttcta	13260
ggatctgtat	ctgccatctc	tgctcaaaaa	tctgccagtc	acattaacga	tcctactgct	13320
ttgttgagca	ccaacacgtc	tatccagaat	ctggccaagg	aagctttccc	agacctgtt	13380
tgttcctcta	attacttggg	gtctgttgaa	tctacgttcg	ccactcaact	cgcctaccgc	13440
cagcgctgt	tccctaacgg	agatgacgaa	aacgtttcaa	ccgtttcaaa	tatctgccct	13500
atggatttga	tgggaagtac	aaagcgctac	aatgacgctt	tcaacaacat	ctttggctct	13560
aaaatgacat	ctactaacia	aaaggggtca	aattgtgaaa	atctactgaa	atctgccatg	13620
tctaacgttc	ctgctatcaa	cactgccttt	ggagcctttg	aagaagcttc	atcttctgtc	13680
aggaataggc	tttctcccct	ttatgaagac	agcaccaaat	attcgtccaa	ccaacttgct	13740
gtacaggcca	tgaccgatac	tgctgtggat	gctttgtccg	ctgtttctac	tgttgtcggg	13800
gcgcagaatg	gcagaaatac	tcttctttct	ctccctactt	ctattacttc	tatcgcaacc	13860
agtggccgtc	catcactctc	ttattcttct	gacatgaaat	ctaacctcat	caagacaatt	13920
tcccgcatca	atagagacgc	tagcctcctg	tcaatgggag	acagccaagt	agctgcagg	13980
tcttcttct	ttactcttt	ccttcgttct	tcttccatcc	ctgtcaccac	cagccaggat	14040
ggaaatgttg	cagcagcgga	aattgttctg	gggactatct	tcgacaagac	tgtggagatc	14100
aacaagagat	tcgagatgct	tggaggagga	aaaatggctg	ccgggagctc	tgaagctcgt	14160
gccattccagc	gcaatacaat	gtcctctatt	ctccagatga	acgaaaaatga	actcgtcctg	14220
gacttgtgcy	aaattgaaaa	taaaattgag	actaggcaac	tgagggatgc	tttccaggat	14280
ttgaagaggt	ctatgctgat	gactccagga	ggcgtgggag	ccatttcttc	tggagcaagt	14340
accaacaatg	ttccctttc	tcttctcatg	tcacgtgtcg	atgcatccag	cggctctctg	14400
atgaacaaca	acagtgccaa	tgtaattgaa	gctgtggata	gtttcaatac	tactcctttg	14460
ctcgttaggc	acatgatgtt	ggatagtggg	aagtcccccg	ttcccatggc	caaggaaaatt	14520
aggagcatgc	tgaccaaac	aagagctctc	accgcccgcg	ctctactgag	cgaatcttcc	14580
cctcttctca	ctgaaatctg	cctctacaac	accgcgaca	ctcaaccaga	aagggcagt	14640
gacagactac	taacttcagc	ctatctagta	aaacaagcta	aaagattcga	cggagttgac	14700
ccagccttcc	ctgccgccct	cacctgcgct	tctcaacctc	tgctttcttc	catggattcc	14760
catacaaagt	catctttcat	ggacaacatc	aaattgcaca	tgactgatac	tcaatgcttc	14820
ttcaagaaca	ttgaacgatt	tgagaaattc	ttgggaagat	atggggacga	atagcccatg	14880
tcccacaagc	aaaattgtaa	ctgccccctc	catctccacc	acacttttac	tccctcagat	14940
aacgagcatc	tttgcctctc	tttcgcatc	gcccgcaccg	aagtctccat	ggaagaaaatt	15000
agagccacac	cctatcaggc	caacaagctt	attagtgaca	aacattacgt	gatgaacatg	15060
tccaagatcg	attctagagt	aacaggatct	tccctcctta	agaaggttag	cgaatggact	15120
gaaatgagaa	tgaactccaa	ctttaatgga	acatttgaac	catcaagact	cgccctctcc	15180
aactctggca	tgacaacggc	aggagtcaac	ctcgacgtta	ttgtcaaac	aaataatgca	15240
agaagtgtac	taggaatatt	ggaatgtcat	cgccagcacg	tgtgcaccgc	cgacgccaag	15300
ggaactgtcg	cttcagccat	gccagccgtc	ttccaggcaa	ccgatggaaa	cggtaacgaa	15360
tctgaactga	tccagaatgc	tctgccaaag	aacagataca	tccaaaagag	cacaatgaac	15420
gctcaactg	tcgtgtttgc	taatgttttg	gaacaactta	tcgccgatct	tggaaaaggt	15480
atcgtgaacg	aactggccgg	caccatcgct	gaatctgtac	cagaaagcgt	atatgaaaac	15540
accaaggaaa	tgattgatag	actaggctct	gacgacctct	tcaaatctaa	taataatgga	15600
ggagttagaat	caatggatta	tgaagatagc	gaaacaacat	ccaacaatgg	tcccgctctc	15660
atctcagaag	ccatgaagaa	tgccgtctat	cacacactaa	tttccggcaa	ggcagctcgc	15720
ccggaaaatg	taccattcgc	ctcatgcgcc	agcggccctc	tcgcctttga	tttcttctct	15780
tcaaagggag	atacattcga	agaaaagaac	gccgaacaag	gtgcagcagc	tgccgtatcc	15840
tctacctatt	cttctctctc	taacactact	cttcgtaagc	atttggtctg	agttttcgaa	15900
gccatctcta	agcaagtaac	tgatgctgaa	ttcaaggata	tcctcaacga	tatcgaaact	15960
aatatttctt	ctgactatac	taactgtcca	ccaaatacta	accaaactgc	ctttgtctta	16020
gctatcaaga	gagaattcag	cagaattggt	tcttctttaa	ccattcttcg	taagaacatt	16080
acaccgcgat	tagtcgacct	taaaggcgcg	ttacacgaga	aagtagccat	ctatttgacc	16140
cttctttcaa	ccaaatcaaa	actagaaaac	tttttccaat	acggtctcag	taattcgctc	16200
tcagttgatc	ttagccatct	aaaacccatt	aattgtagca	acaatgtcaa	gaatattgaa	16260
gacacattca	tgtacagaaa	tgtccaccct	attcttatta	tggccctccc	agaaaatttc	16320
acagctctct	tgcaacagga	acaaatggag	cccgatactg	ccattgaaag	cagacgctcc	16380
cttaccacct	tcttaataca	tcccaacact	gcttcaatgg	cgaacgggtc	aagagccgct	16440
gtgggtgcag	gaggaggaaa	cccaatgggc	ttgtatcttt	cttccacat	tcttcacgag	16500
tctaccgtca	caacatcaaa	ccccgtcaca	gacaccacag	aaaacgtcaa	ctatcattcc	16560
tctgttacac	aagatcctgt	tatggtagtg	aaccccttca	aggattctgc	taggttgatc	16620
gttaacaaca	acaatactgg	aattgatgtc	ttgaatgata	agtcgtgcaa	ctacttgcaa	16680
gtatccatgc	catctgaatc	atctggcctc	gtcaccaata	ctggatgctc	ttcttcttct	16740

```

tcctcatctt cgtctgatac cttcaagtac gtcaggagag acaatacggc tgtgaatctt 16800
ccccgtgtca caccagccgt tctctgttct gatgcttcct ctaatctctt ggacgtgttc 16860
tccagggcag atattgtcct cgaaaacatg aacgtgagat ttggtttcat gcccagagatt 16920
attgctgccg tctccaaatt caaggggctg accaaggaag aggttattaa gcaaattggtt 16980
tctcagaaca acatcaacaa caacagcaac aacaacaacg gaaatgggaa gaaaacaacc 17040
gtcgatccag tcactgggga tattgttatc accaatgcc aattccccga cactcgctct 17100
ctatacactg cagcaaattg aggaacatca tcattcaaatt ggggagatat caacgcacaga 17160
aaaatgcacg ccaaggcttt cccaccttc tttattggta acccaaccgc cgccgcaaca 17220
gctaacggag tgcctcttac atctgaggga atttccctca ctgaagaaaa acgcaagaaa 17280
atcgcaggca tctctgaagg atcaattggc acgggggctc tgcgtgcagc cgccaacacc 17340
cgctctcat cgcacatgga acctgtcatg aagggatgga acaacattgt tcagcttcaa 17400
caaacattca agaaagcttc agataaaactc actcatcttt tgagatcggg aggaattcca 17460
cccagaagcc aagaaacaaa cgctattatt aacaagatgc acgacagctt caagacattg 17520
gaggaatgtc gtaggggtgat ccaagacgag gctgctctgc tcgttgccac cagcgatctt 17580
ttgaccggtg gctacggagg agatgctgct ctggccatgg tttctccagt acgtccagaa 17640
atgactggtc ttattggtgc aatctccgcg ccagttagag gtattagcca cttgttgaaa 17700
ctgggaggtg tttctgctgc taacgcagct atccgcaagc gcctcaacct acctacatcc 17760
aacgggaaaa cactaccaga acatggaatc gtacacaaat cagccaagac acttttgctt 17820
gattcagact ctattagcaa cctatacaac actgatcttc aagacgttgt ctctaacgct 17880
agggataaca acaatttggg aagaattatt caatcttgg gacttaaggg gaataatgca 17940
ggggatttgg tttattctgc tagacaactg acggacctta ttactgtacc agaatatgga 18000
aacaatcgcg atcttacc aa gcgtcaagct atccttaaaa tgctcatttc taaccctgaa 18060
attctagaaa atgttgacaga taccatttac cttacaacag gtaaaaatgc tctcgcaccg 18120
gtatctgctc aggaaatggc ttgtgctgct ctgacagtcg gaggaagtgg aggaggaaaa 18180
ctgtcatcag acgacaatgt tcaatccctg aaccgccttt attttcgggt cttag 18234

```

&lt;210&gt; 61

&lt;211&gt; 6025

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 61

```

Met Asp Gln Tyr Pro Glu Val Arg Asp Thr Pro Gln Thr Glu Gln Glu
1      5      10      15
Gln Ala Ala Ala Gln Gln Gln Gln Ala Ala Thr Thr Thr Ala Ala Ala
20      25      30
Ala Ala Ala Ala Ala Pro Thr Gln Tyr Ser Asn Thr Val Ser Ala Glu
35      40      45
Thr Leu Ser Ala Ile Ser Glu Asp Gly Lys Leu Glu Arg Ser Ile Ala
50      55      60
Ala Ser Cys Trp Ile Asn Asn Leu Asn Pro Asp Glu Lys Met Ala Gln
65      70      75      80
Arg Val Gln Phe His Pro Leu Ser Ser Thr Thr Thr Tyr Asp Ser Glu
85      90      95
Asn Val Asn Pro Gly Ser Ser Val Val Phe Leu Lys Pro Arg Ala Leu
100     105     110
Pro Thr Gly Gly Thr Cys Leu Ala Pro Asn Tyr Ile Ala Val Pro Thr
115     120     125
Leu Arg Ala Ala Ser Glu Ile Ile Asp Ser Ile Ala Ser Thr Ser Leu
130     135     140
Tyr Gln Cys Ser Met Phe Asn Ser Trp Asn Leu Ile Pro Ile Phe Met
145     150     155     160
Ser Asn Ser Lys His Ser Gln Phe Gly Asp Arg Val Ile Lys Arg Ser
165     170     175
Met Ile Arg Asn Cys Phe Ser Lys Gln Lys Asn Val Glu Asn Leu Leu
180     185     190
Lys Glu Leu Arg Arg Arg Lys Val Asn Ala Ala Lys Ala Phe Ser His
195     200     205
Ala Val Gln Gln Lys Ser Ala Val Asn Thr Ala Ala Trp Asn Ala Gly
210     215     220
Ser Ala Ala Asn Leu Glu Lys Leu Val Asp Phe Cys Lys Leu Lys Tyr

```

225									230			235			240		
Ser	Pro	Asp	Arg	Lys	Tyr	Lys	Ala	Gly	Gly	Leu	Phe	Ser	Ala	Ser	Ala		
				245					250					255			
Thr	Ala	Gln	Ser	Gln	Ser	Gly	Thr	Ser	Ser	Ser	Ser	Val	Glu	His	Thr		
			260					265					270				
Ser	Asn	Asp	Phe	Leu	Leu	Asp	Ile	Leu	Lys	Arg	His	Lys	Gly	Thr	Ser		
		275					280					285					
Leu	Asp	Leu	Asp	Ser	Ala	Thr	Asn	Thr	Phe	Asp	Thr	Ala	Leu	Ser	Arg		
	290					295					300						
Val	Phe	Thr	Glu	Phe	Lys	Glu	Gln	Ala	Arg	Ala	Ala	Val	Asp	Ala	Ala		
305					310					315						320	
Ala	Asp	Ser	Asp	His	Leu	Ser	Ala	Ser	Asp	Pro	Ile	Phe	Ser	Ile	Val		
				325					330					335			
Arg	His	Asn	Ser	Arg	Arg	Glu	Gly	Ile	Leu	Asp	Ser	Val	Pro	Asn	Ile		
			340					345					350				
Gly	Met	Leu	Ala	Pro	Arg	Ser	Lys	Tyr	Ser	Val	Ala	Glu	Tyr	Leu	Met		
		355					360					365					
Ala	Asp	Arg	Asp	Glu	Ser	Ala	Asp	Ile	Ala	Ala	Lys	Ile	Gly	Thr	Lys		
	370					375					380						
Ile	Ala	Thr	Asp	Phe	Glu	Ala	Leu	Arg	Gly	Asp	Asn	Asn	Lys	Arg	Arg		
385					390					395					400		
Ala	Asp	Thr	Ser	Val	Asp	Asp	Leu	Lys	Glu	Ser	Leu	Ala	Asp	Ser	Ile		
				405					410					415			
Glu	Lys	Thr	Ser	Ile	Lys	Asn	Thr	Gly	Asp	Ile	Asn	Ser	Val	Thr	Asn		
			420					425					430				
Ile	Pro	Thr	Asp	Thr	Glu	Glu	Tyr	Glu	Phe	Ser	Leu	His	Ile	Thr	Gln		
		435					440					445					
Leu	Phe	Ala	Gln	Ala	Phe	Leu	Glu	Thr	Met	Gly	Ser	Leu	Leu	Ser	Cys		
	450					455				460							
Ala	Phe	Gly	Val	Gln	Phe	Pro	Phe	Ser	Asp	Glu	Gly	Phe	Ala	Ala	Ile		
465					470					475					480		
Glu	Arg	Ile	Ile	Arg	Lys	Thr	Asp	Pro	Asp	Thr	Gly	Lys	Val	Ser	Glu		
				485					490					495			
Met	Asp	Pro	Ser	Ser	Leu	Ser	Asp	Gln	Tyr	Leu	Leu	Leu	Val	Gly	Asn		
			500					505					510				
Phe	Gln	Val	Ser	Pro	Phe	His	Val	Ser	Asp	Pro	Lys	Asp	Ile	Val	Phe		
		515					520					525					
Gly	Arg	Gln	Val	Thr	Pro	Asn	Thr	Pro	Ile	Leu	Ser	Ile	Ile	Thr	Arg		
					535					540							
Ser	Lys	Asn	Asp	Lys	Asn	Glu	Thr	Ser	Thr	Ile	Ile	Asn	Phe	Arg	Asp		
545					550					555					560		
Arg	Leu	Leu	Val	Asn	Asp	Thr	Val	Leu	Arg	Asp	Ala	Thr	Gln	Asn	Val		
				565					570								

Ile	Arg	Ala	Lys	Ala	Lys	Glu	Asp	Ala	Leu	Ser	Arg	Ala	Glu	Ile	Leu	725	730	735
Ala	Val	Arg	Lys	Gln	Leu	Asp	Gly	Lys	Cys	Ser	Ser	Ser	Arg	Asp	Glu	740	745	750
Tyr	Ser	Met	Val	Glu	Arg	Tyr	Leu	Arg	Asp	Ser	Phe	Phe	Arg	Ser	Val	755	760	765
Asn	Arg	Ser	Gly	Gly	Gly	Tyr	Glu	Met	Phe	Asp	Gln	Gly	Phe	Asp	Met	770	775	780
Gly	Arg	Phe	Ala	Asp	Phe	Leu	Ser	Asp	Asn	Ser	Ala	Ala	Arg	Asn	Ala	785	790	800
Trp	Gln	Gln	Tyr	Ala	Glu	Val	Met	Arg	Gly	Leu	Ser	Lys	His	Glu	Lys	805	810	815
Arg	Val	Phe	Asn	Ile	Glu	Gly	Leu	Phe	Ser	Ala	Leu	Asn	Ser	Phe	Lys	820	825	830
Phe	Pro	Leu	Val	Pro	Glu	Gln	Gly	Arg	Lys	Lys	Thr	Val	Gly	Gly	Arg	835	840	845
His	Arg	Leu	Asn	Asn	Leu	Lys	Ala	Ala	Asn	Lys	Ile	Ile	Asn	Gly	Ile	850	855	860
Thr	Glu	Met	Thr	Leu	Gln	Ser	Ala	Ile	Asp	Gly	Thr	Gly	Ile	Ser	Asp	865	870	880
Ile	Ile	Gly	Ser	Val	Ser	Asp	Gly	Trp	Gly	Asn	Thr	Thr	Ala	Gln	Pro	885	890	895
Ser	Arg	Val	Lys	Ala	Leu	Lys	Thr	Leu	Ser	Asn	Phe	Ser	Gly	Asn	Gly	900	905	910
Asn	Val	Val	Ser	Ile	Pro	Val	Ser	Arg	Ala	Val	Lys	Cys	Ala	Ala	Gly	915	920	925
Ser	Arg	Gly	Gly	Glu	Thr	Leu	Lys	Cys	Val	Asp	Ile	Pro	Ser	Val	Ile	930	935	940
Ile	Ala	Asn	Leu	Ile	Ser	Asp	Lys	Arg	Ile	Leu	Asp	Gln	Leu	Cys	Gly	945	950	955
Gly	Gly	Met	Asn	Leu	Ala	His	Glu	Ile	Thr	Asn	Phe	Ile	Glu	Thr	Ile	965	970	975
Ala	Gly	Lys	Glu	His	Thr	Gly	Lys	Glu	Ser	Val	Phe	Leu	Ser	Pro	Arg	980	985	990
Leu	Ser	Val	Ile	Leu	Leu	Arg	Tyr	Ile	Trp	Phe	Asn	Ala	Ala	Val	Val	995	1000	1005
Ser	Leu	Thr	Asp	Ser	Asn	Ile	Lys	Met	Pro	Leu	Asn	Thr	Met	Ser	Glu	1010	1015	1020
Gly	Thr	Gly	Asp	Asp	Ile	Tyr	Arg	Asp	Tyr	Leu	Ala	Ile	Arg	Gly	Met	1025	1030	1035
Val	Asn	Asn	Tyr	Asn	Ser	Ser	Leu	Ser	Ser	Ile	Ser	Val	Lys	Ala	Ile	1045	1050	1055
Ser	Asp	Arg	Tyr	Asn	Cys	Gly	Ser	Gly	Asn	Thr	Ser	Thr	Ser	Asn	Lys	1060	1065	1070
Asn	Val	Thr	Ile	Lys	Thr	Gln	Gly	Glu	Leu	Leu	Thr	Val	Leu	Gln	Gln	1075	1080	1085
Thr	Ala	Asn	Ala	Leu	Ser	Ala	Phe	Thr	Asn	Lys	Gly	Gly	Val	Gly	Ala	1090	1095	1100
Thr	Pro	Asp	Ala	Ala	Asn	Met	Ala	Asn	Val	Ile	Ser	Pro	Ile	Ala	Asn	1105	1110	1115
Ala	Asp	Val	Val	Lys	Asn	Thr	Asn	Val	Val	Val	Ser	Gly	Leu	Asp	Arg	1125	1130	1135
Ile	Thr	Glu	Thr	Ile	Asn	Phe	Phe	Ser	Phe	Leu	Ser	Gln	Ile	Lys	Thr	1140	1145	1150
Met	Asn	Glu	Asn	Ile	Glu	Glu	Tyr	Leu	Arg	Arg	Tyr	Arg	Leu	Gly	Glu	1155	1160	1165
Gly	Leu	Asp	Lys	Lys	Glu	Leu	Asp	Asn	Phe	Val	Tyr	Pro	Asn	Ile	Ala	1170	1175	1180
Ala	Ile	Val	Lys	Arg	Glu	Leu	Gly	Val	Ser	Gly	Ser	Ala	Leu	Ser	Ser	1185	1190	1195
Asn	Leu	Asp	Thr	Asp	Arg	Pro	Ile	Thr	Ile	Asp	Leu	Asn	Thr	Glu	Gln			

				1205					1210				1215			
Pro	Leu	Ile	Val	Lys	Ala	Ser	Lys	Gly	Tyr	Asn	Arg	Tyr	Ala	Lys	Leu	
			1220					1225					1230			
Phe	Asn	Lys	Thr	Thr	Arg	Thr	Ala	Ala	Glu	Gln	Ala	Gln	Met	Glu	Gln	
		1235					1240					1245				
Tyr	Asn	Ala	Gln	Met	Ala	Ala	Asn	Thr	Ile	Pro	Gln	Leu	Val	Asn	Arg	
	1250					1255				1260						
Leu	Thr	Ile	Pro	Gly	Ser	Ile	Thr	Ala	Asp	Thr	Ala	Ile	Asn	Val	Val	
1265				1270					1275						1280	
Lys	Ala	Phe	Thr	Glu	Asn	Gly	Glu	Phe	Ser	Asn	Ala	Glu	Thr	His	Leu	
			1285					1290						1295		
Gly	Val	Met	Gly	Asn	Ala	Ile	Asn	Glu	Met	Gln	Pro	Leu	Phe	Thr	Asp	
			1300					1305					1310			
Gly	Phe	Asn	Val	Ala	Asn	Lys	Arg	Leu	Thr	Val	Asn	Val	Gly	Ser	Val	
	1315						1320					1325				
Ser	Lys	Leu	Ile	Gln	Asn	Gly	Leu	Thr	Val	Ser	Leu	Ile	Leu	Ala	His	
	1330					1335				1340						
Ser	Lys	Asp	Tyr	Val	Phe	Lys	Pro	Leu	Val	Gln	Asp	Phe	Ala	Lys	Leu	
1345				1350					1355						1360	
Leu	Leu	Ala	Val	Thr	Ala	Glu	Thr	Ser	Leu	Val	Val	Ser	Arg	Ser	Gln	
			1365					1370						1375		
Lys	Ser	Phe	Phe	Pro	Ile	Pro	Pro	Ser	Val	Phe	Ser	Ser	Gly	Gly	Leu	
			1380					1385					1390			
Phe	Lys	Ile	Asp	Arg	Glu	Met	Phe	Asp	Asn	Met	Lys	Thr	Asp	Tyr	Val	
	1395						1400					1405				
Val	Glu	Val	Ile	Arg	Gln	Leu	Ser	Lys	Asn	Ala	Thr	Ala	Ala	Ile	Glu	
	1410					1415				1420						
Arg	Cys	Asn	Asp	Ser	Asp	Ser	Ala	Ala	Arg	Ile	Ala	Lys	Ser	Gly	Glu	
1425				1430					1435					1440		
Ile	Tyr	Asn	Lys	Asp	Val	Ala	Ser	Thr	Thr	Ala	Ala	Pro	Gly	Thr	Ser	
			1445					1450					1455			
Ser	Ser	Ala	Leu	Thr	Leu	Phe	Ala	Asn	Asn	Leu	Gln	Asn	Pro	Ala	Lys	
			1460					1465					1470			
Val	Trp	Ser	Met	Gly	Ala	Leu	Pro	His	Phe	Asp	Met	Ala	Val	Val	Pro	
	1475						1480					1485				
Lys	Leu	His	Gly	Ile	Ser	His	Asp	Gln	Met	Phe	Arg	Leu	Ser	Thr	Tyr	
	1490					1495				1500						
Tyr	Gln	Gly	Ile	His	Lys	Met	Glu	Leu	Asn	Ser	Asp	Cys	Lys	Pro	Glu	
1505				1510					1515					1520		
Glu	Trp	Asp	Asn	Ser	Leu	Pro	Gly	Asn	Arg	Ala	Ser	Lys	Phe	Phe	Gly	

Val Met Ser Lys Glu Glu Asp Val Arg Ser Ser Ser Arg Lys Ile Met  
1700 1705 1710  
Gly Met Val Glu Gln Glu Ser Pro Val Met Gln Asp Ile Gly Ile Asp  
1715 1720 1725  
Arg Ile Ala Ser Leu Val Ser Thr Val Ala Thr Pro Lys Gln His Arg  
1730 1735 1740  
Arg Phe Leu Gln Thr Val Asn Asp Tyr Lys Asn Tyr Leu Ile Arg Lys  
1745 1750 1755 1760  
Val Asn Pro Leu Leu Ser Ser Arg Leu Gly Gly Ile Ser Pro Thr Ser  
1765 1770 1775  
Gly Asn Thr Asp Tyr Asn Leu Lys Ala Val Tyr Asp Gly Val Val Ser  
1780 1785 1790  
Ser Ser Ser Ser Met Thr Pro Ser Ser Met Ser Val Ser Asp Arg Phe  
1795 1800 1805  
Trp Ser Gly Val Phe Ser Gln Cys Leu Glu Thr Gly Pro Ser Met Phe  
1810 1815 1820  
Ala Asp Ala Gly His Gly Gly Ser Asn Met Phe Gln Ile Thr Ala Pro  
1825 1830 1835 1840  
Lys Leu Tyr Gly Ser Arg Val Asn Thr Tyr Ala Ala Leu Ser Ser Gly  
1845 1850 1855  
Val Glu Arg Leu Arg Asp Ser Ile Ser Ser Ala Thr Gln Glu Arg Lys  
1860 1865 1870  
Asn Arg Ile Ala Lys Ser Ile Glu Ala Leu Glu Thr Phe Val Thr Asp  
1875 1880 1885  
Val Val Gly Gly Asp Thr Leu Asp Gln Leu Arg Lys Ala Gln Asn Met  
1890 1895 1900  
Tyr Asn Lys Leu Ser Asp Ile Thr Ser Asn Ser Ile Tyr Ser Asp Phe  
1905 1910 1915 1920  
Gly Asn Ile Asp Cys Ala Lys Ile Met Lys Asn Val Thr Ser Lys Lys  
1925 1930 1935  
Met Thr Ala Arg Gln Gln Ser Asp Thr Ile Leu Ser Ser Leu Leu His  
1940 1945 1950  
Glu Leu Ala Gly Leu Val His Lys Gln Gln Pro Gln Leu Ala Thr Gln  
1955 1960 1965  
Phe Ala Ser His Val Ile Lys Ala Lys Tyr Val Thr Asn Asp Leu Asn  
1970 1975 1980  
Asn Ile His Glu Lys Glu Thr Phe Ser Gln Leu Met Ala Val Ala Gly  
1985 1990 1995 2000  
Val Ala Asp Tyr Tyr Asn Val Ser Ala Ala Ala Met Cys Gln Arg Leu  
2005 2010 2015  
Val Ala Ser Asp Val Thr Met Phe Leu Gly Gly Thr Met Leu Gln Gln  
2020 2025 2030  
Gly Leu Phe Val Ser Phe Leu Leu Asn Asn Val Leu Phe Ser Gln Val  
2035 2040 2045  
Ser Asp Asn Ile Lys Met Asn Glu Leu Asn Asp Glu Thr Lys Ser Leu  
2050 2055 2060  
Leu Val Lys Leu Val Gly Phe Cys Gly Thr Val Ser Asp Ala Leu Gly  
2065 2070 2075 2080  
Ser Arg His Val Ser Ser Ile Arg Arg Val Gln Asn Glu Glu Asp Lys  
2085 2090 2095  
Lys Leu Asp Arg Ser Phe Val Thr Ser Lys Ala Tyr Arg Asp Leu Arg  
2100 2105 2110  
Lys Lys Thr Glu Leu Tyr Arg Glu Thr Asp Thr Ile Asn Lys Leu Phe  
2115 2120 2125  
Gly His Gln Asn Phe Met Ser Tyr Glu Ser Ser Met Leu Lys Arg Thr  
2130 2135 2140  
Ser Leu Val His Asp Ala Val Ser Gly Pro Arg Pro Arg Arg Tyr Ser  
2145 2150 2155 2160  
Thr Leu Glu Asp Val Leu Glu Ala Pro Ser Thr Val His Lys Ser Phe  
2165 2170 2175  
Met Val Ser Tyr Pro Glu Arg Ala Ala Ala Ser Arg Arg Val Lys Arg

**WO 01/38351**

**PCT/US00/28888**

148

[illegible]



Leu Glu Trp Met Thr Thr Ala Ala Ile Val Phe Ala Arg Ser Phe Asn  
 2675 2680 2685  
 Asp Thr Thr Phe His Ala Leu Glu Asp Thr Leu Lys Met Thr Ser Ala  
 2690 2695 2700  
 Leu Thr Asp Met Tyr Ser Ala Phe Thr Asn Leu Val Gly Ser Glu His  
 2705 2710 2715 2720  
 Ser Gln Arg Leu Lys Val Lys Ser Thr Leu Leu Asp Ser Ile Phe Asn  
 2725 2730 2735  
 Thr Arg Met Ala His Thr Glu Ala Val Met Gly Leu Val Tyr Pro Thr  
 2740 2745 2750  
 Ala Phe Ile Asn His Glu Met Pro Ser Asp Tyr Thr Gln Arg Arg Glu  
 2755 2760 2765  
 Met Gln Ser Leu Ala Leu Asn Ile Leu Arg Gly Val Asn Cys Ser Gln  
 2770 2775 2780  
 Leu Pro Arg Lys Asp Ile Gly Asp Thr Ala Gly Leu Leu Thr Phe Ile  
 2785 2790 2795 2800  
 Thr Ser Arg Lys Phe Ala Gly Tyr Gly Gly Glu Arg Gly Gly Leu Ser  
 2805 2810 2815  
 Leu Tyr Arg Met Ser Ile Val Asp Ala Leu Ser Cys Pro Ser Asp Asn  
 2820 2825 2830  
 Arg Leu Lys Gly Ala Val Ser Leu Glu Val Gly Lys Trp Gln Asp Met  
 2835 2840 2845  
 Gly Glu Glu Ile Phe Tyr Lys Arg Ser Asn Asp Leu Val Asp Phe Cys  
 2850 2855 2860  
 Ser Lys Asn Asn Ile Ser Leu Glu Asn Ala Val Gly Pro Ile Ala Arg  
 2865 2870 2875 2880  
 Phe Val Pro Asn Gly Thr Asn Met Ala Asp Ile Gly Met Thr Asp Ile  
 2885 2890 2895  
 Ile Ser Arg Thr Val Lys Asp Asp Ala Ser Met Ile Arg Leu Arg Arg  
 2900 2905 2910  
 Ala Glu Glu Gly Ala Gly Ala Ala Gly Lys Phe Ile Thr Ala Ser Ala  
 2915 2920 2925  
 Met Gly Asn Leu Tyr Gly Gly Ile Asp Thr Val Val Asn Leu Thr Glu  
 2930 2935 2940  
 Lys Leu Tyr Asp Ser Phe Val Leu Leu Gln Asp Ser Asp Ser Phe Asn  
 2945 2950 2955 2960  
 Thr Pro Thr Glu Met Ala Thr Ala Ile Ile Asn Arg Met Lys Ser Arg  
 2965 2970 2975  
 Lys His Lys Ala Leu Lys Thr Pro Phe Gly Gly Asp Ile Ala Thr Tyr  
 2980 2985 2990  
 Lys Asn Phe Pro Ser Ser Ser Glu Ala Ile Val Val Arg Ala Lys Glu  
 2995 3000 3005  
 Met Arg Asn Ser Ile Ser Thr Ile Val Met Asp Ile Ser Lys Ser Arg  
 3010 3015 3020  
 Gly Ile Asn Ser Phe Ser Ser Arg Ser Gly Ser Thr Leu Ala Lys Ile  
 3025 3030 3035 3040  
 Ser Thr Ser Glu Phe Glu Arg Ile Thr Ser Ala Val Leu Ser Asn Thr  
 3045 3050 3055  
 Lys Ala Asn Leu Arg Thr Ile Glu Asn Arg Leu Ala Glu His Tyr Asn  
 3060 3065 3070  
 Lys Leu Lys Gln Phe Ser His Asn Asp Gly Leu Ser Glu Thr Arg Ala  
 3075 3080 3085  
 Val Val Ala Val Ile Ala Glu Ser Leu Thr Pro Val Tyr Ala Asp Asp  
 3090 3095 3100  
 Thr Ser Gly Ala Ser Val Ser Glu Leu Leu Thr Asp Asn Thr Leu Leu  
 3105 3110 3115 3120  
 Lys Phe Ile Val Gln Asn Glu Leu Lys Asn Ile Glu Glu Ala Lys Arg  
 3125 3130 3135  
 His Val Thr Ala Ala Ile Glu Gly Ser Ser Gln Leu His Glu Lys Met  
 3140 3145 3150  
 Leu Ser Leu Leu Val Ala Ser Ala Asp Ile Asn Arg Met Ser Ala Gln



Ala Ile Asp Lys Leu Asn Glu Tyr Tyr Gln Leu Ile Asp Ala Ile Lys  
 3650 3655 3660  
 Thr Lys Ile Val Ser Asp Thr Lys Gln Ala Ser Ser Trp Ala Ile Lys  
 3665 3670 3675 3680  
 Glu Thr Asp Lys Glu Leu Asp Met Asp Lys Glu Gln Val Ile Ser Lys  
 3685 3690 3695  
 Ile Asn Asn Leu Gln Gln Asn Phe Ser Asn Glu Ser Asp Lys Ile Lys  
 3700 3705 3710  
 Met Ala Ile Ser Val Leu Asp Asn Lys Arg Asn Glu Leu Glu Leu Gln  
 3715 3720 3725  
 Asn Asn Lys Thr Arg Ser Phe Ile Glu Thr Thr Lys Ser Arg Ile Glu  
 3730 3735 3740  
 Ala Gly Gly Gly Asp Val Ala Asn Phe Lys Glu Ile Ile Asp Tyr Glu  
 3745 3750 3755 3760  
 Asn Thr Ser Glu Asn Asp Asn Asn Leu Phe Gln Ser Leu Lys Ala Phe  
 3765 3770 3775  
 Ala Ala Asp Asn Ser Gly Thr Val Tyr Thr Pro Thr Asp Met Ser Asn  
 3780 3785 3790  
 Gly Arg Asp Thr Lys Ser Asp Ser Lys Phe Val Asp Met Tyr Asn Lys  
 3795 3800 3805  
 Gln Ile Gly Gly Ile Lys Leu Ile Asn Glu Gly Gln Asn Thr Val Lys  
 3810 3815 3820  
 Val Asp Phe Ser Lys Ala Leu Glu Ala Phe Pro Arg Gln Ser Asn Gly  
 3825 3830 3835 3840  
 Ala Ser Glu Pro Val Ser Ser Ser Val Val Glu Arg Arg Gln Arg Glu  
 3845 3850 3855  
 Arg Leu Gln Ala Val Glu Met Phe Met Ala Ile Met Met Glu Arg Thr  
 3860 3865 3870  
 Glu Ser Leu Arg Lys Arg Leu Ala Asp Ser Ala Ala Gln Trp Asn Thr  
 3875 3880 3885  
 Val Asn Asn Val Glu Glu Thr Val Asn Ser Gly Met Val Asn Ile Lys  
 3890 3895 3900  
 Ser Leu Thr Glu Ile Arg Asn Gln Ala Gln Ile Ala Glu Ser Thr Ala  
 3905 3910 3915 3920  
 Leu Asn Ser Ile Asn Asp Glu Ile Val Glu Ser Pro Leu Thr Leu Ser  
 3925 3930 3935  
 Leu Gly Ala Arg Val Asp Gln Leu Leu Ile Lys Val Asp Arg Val Gly  
 3940 3945 3950  
 Ser Ile Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Leu Pro  
 3955 3960 3965  
 Lys Leu Thr Ala Thr Glu Gln Arg Lys Glu Gln Gln Tyr Ala Ala Asp  
 3970 3975 3980  
 Arg Val Val Tyr Asp Pro Ser Tyr Thr Cys Phe Leu Gln Pro Leu His  
 3985 3990 3995 4000  
 Glu Thr Ile Lys Arg Ile Ser Ser Val Tyr Asn Ser Lys Asn Lys Gly  
 4005 4010 4015  
 Pro Leu Ser Asn Thr Arg Gly Val Pro Thr Ser Asp Ala Asp Leu Gln  
 4020 4025 4030  
 Leu Met Thr Ile Thr Asp Leu Ser Arg Ser Val Leu Asp Ser Ser Ser  
 4035 4040 4045  
 Thr Ser Ser Lys Lys Met Leu Tyr Glu Asn Val Pro Ser Ser Ile Val  
 4050 4055 4060  
 Pro Gly Leu Cys Gln Gln Cys Ala Met Met Ile Thr Asn Val His Glu  
 4065 4070 4075 4080  
 Ala Thr His Thr Ser Pro His Ser Phe Asn Phe Glu Asn Lys Arg Ser  
 4085 4090 4095  
 Leu Lys Gln Leu Thr Glu Met Leu Asn Ala Ala Thr Ser Ser Ser Asp  
 4100 4105 4110  
 Gly Pro Ala Val Arg His Asp Val Leu Thr Met Leu Glu Ser Asn Asn  
 4115 4120 4125  
 Gly Tyr Val Lys Asp Phe Gly Phe Thr Gln Lys Val Ala Cys Ile Thr

4130	4135	4140	
Pro Val Asn Thr Leu	Leu Gly Gly Thr Phe Ser Gly Asn Val Ala Pro		
4145	4150	4155	4160
Asn Thr Val Ile Leu	Pro Thr Ser Glu Leu Phe Asn Cys Pro Gly Val		
	4165	4170	4175
Glu Asn Asp Lys Phe Arg Ser Met Val Asn Arg Thr Thr Asp Lys Asn			
	4180	4185	4190
Val Ala Asp Ala Pro Lys Ser Ser Ala Ser Ile Val Glu Thr Leu Ala			
	4195	4200	4205
Arg Thr Ser Pro Asn Ala Glu His Leu Tyr Phe Pro Phe Lys Asp Gln			
	4210	4215	4220
Arg Arg His Phe Asn Ser Ile Thr Asp Ala Ile Ile Ser Gly Met Ser			
	4225	4230	4235
Gly Glu Ser Ser Ser Glu Leu Asn Thr Thr Cys Asp Gln Asn Leu Val			
	4245	4250	4255
Asn Ile Asp Gln Thr Thr Gly Phe Pro Val Phe Thr Gly Arg Lys Gln			
	4260	4265	4270
Gly Glu Arg Arg Ile Val His Thr Glu Asn Thr Met Glu Gly Ala Arg			
	4275	4280	4285
Lys Asp Lys Asn Ser Gly Ile Pro Ser Cys Thr Lys Asp Arg Gln Thr			
	4290	4295	4300
Tyr Ile Asp Met Gly Thr Lys Phe Met Val Ala Pro Gly Ser Leu Leu			
	4305	4310	4315
Asn Ala Asn Lys Glu Glu Thr Leu Arg Leu Asn Arg Leu Ser Asp Ile			
	4325	4330	4335
Asn Asn Val Arg His Tyr Gly Thr Asp Val His Val Ala Gly Ala Asn			
	4340	4345	4350
Ser Ala Trp Arg Ile Gly Glu Val Val Arg Ala Ala Ser Ser Phe Pro			
	4355	4360	4365
Asp Gly Asp Lys Glu Ser Ala Met Lys Lys Met Leu Leu Leu Gly Ser			
	4370	4375	4380
Val Ser Ala Ile Ser Ala Gln Lys Ser Ala Ser His Ile Asn Asp Pro			
	4385	4390	4395
Thr Ala Leu Leu Ser Thr Asn Thr Ser Ile Gln Asn Leu Val Lys Glu			
	4405	4410	4415
Ala Phe Pro Asp Pro Val Cys Ser Ser Asn Tyr Leu Gly Ser Ala Glu			
	4420	4425	4430
Ser Thr Phe Ala Thr Gln Leu Ala Tyr Arg Gln Arg Leu Phe Pro Asn			
	4435	4440	4445
Gly Asp Asp Glu Asn Val Thr Thr Val Ser Asn Ile Cys Pro Met Asp			
	4450	4455	4460
Leu Met Gly Ser Thr Lys Arg Tyr Asn Asp Ala Phe Asn Asn Ile Phe			
	4465	4470	4475
Gly Ser Lys Met Thr Ser Thr Asn Lys Lys Gly Ser Asn Cys Glu Asn			
	4485	4490	4495
Leu Leu Lys Ser Ala Met Ser Asn Val Pro Ala Ile Asn Thr Ala Phe			
	4500	4505	4510
Gly Ala Phe Glu Glu Ala Ser Ser Ser Val Arg Asn Arg Leu Ser Pro			
	4515	4520	4525
Leu Tyr Glu Asp Ser Thr Lys Tyr Ser Ser Asn Gln Leu Ala Val Gln			
	4530	4535	4540
Ala Met Thr Asp Thr Ala Val Asp Ala Leu Ser Ala Val Ser Thr Val			
	4545	4550	4555
Val Gly Arg Gln Asn Gly Arg Asn Thr Leu Leu Ser Leu Pro Thr Ser			
	4565	4570	4575
Ile Thr Ser Ile Ala Thr Ser Gly Arg Pro Ser Leu Ser Tyr Ser Ser			
	4580	4585	4590
Asp Met Lys Ser Asn Leu Ile Lys Thr Ile Ser Arg Ile Asn Arg Asp			
	4595	4600	4605
Ala Ser Leu Leu Ser Met Gly Asp Ser Gln Val Ala Ala Gly Ser Ser			
	4610	4615	4620

Phe Phe Asn Ser Phe Leu Arg Ser Ser Ser Ile Pro Val Thr Thr Ser  
 4625 4630 4635 4640  
 Gln Asp Gly Asn Val Ala Ala Ala Glu Ile Val Leu Gly Thr Ile Leu  
 4645 4650 4655  
 Asp Lys Thr Val Glu Ile Asn Lys Arg Phe Glu Met Leu Gly Gly Gly  
 4660 4665 4670  
 Lys Met Val Ala Gly Ser Pro Glu Ala Arg Ala Ile Gln Arg Asn Thr  
 4675 4680 4685  
 Met Ser Ser Ile Leu Gln Met Asn Glu Asn Glu Leu Ala Arg Asp Leu  
 4690 4695 4700  
 Cys Glu Ile Glu Asn Lys Ile Glu Thr Arg Gln Leu Arg Asp Ala Phe  
 4705 4710 4715 4720  
 Gln Asp Leu Lys Arg Ser Met Leu Met Thr Pro Gly Gly Val Gly Ala  
 4725 4730 4735  
 Ile Ser Ser Gly Ala Ser Thr Asn Asn Val Pro Leu Ser Leu Leu Met  
 4740 4745 4750  
 Ser Arg Val Asp Ala Ser Ser Gly Leu Leu Met Asn Asn Asn Ser Ala  
 4755 4760 4765  
 Asn Val Met Glu Ala Val Asp Ser Phe Asn Thr Thr Pro Leu Leu Val  
 4770 4775 4780  
 Arg His Met Met Leu Asp Ser Gly Lys Ser Pro Val Pro Met Ala Lys  
 4785 4790 4795 4800  
 Glu Ile Arg Ser Met Leu Thr Gln Pro Arg Ala Leu Thr Ala Arg Ala  
 4805 4810 4815  
 Leu Leu Ser Glu Ser Ser Pro Leu Leu Thr Glu Ile Cys Leu Tyr Asn  
 4820 4825 4830  
 Thr Arg Asp Thr Gln Pro Glu Arg Ala Val Asp Arg Leu Leu Thr Ser  
 4835 4840 4845  
 Ala Tyr Leu Val Lys Gln Ala Lys Arg Phe Asp Gly Val Asp Pro Ala  
 4850 4855 4860  
 Phe Pro Ala Ala Leu Thr Cys Ala Ser His Leu Met Leu Ser Ser Met  
 4865 4870 4875 4880  
 Asp Ser His Thr Lys Ser Ser Phe Met Asp Asn Ile Lys Leu His Met  
 4885 4890 4895  
 Thr Asp Thr Gln Cys Phe Phe Lys Asn Ile Glu Arg Phe Glu Lys Phe  
 4900 4905 4910  
 Leu Gly Arg Tyr Gly Asp Glu Tyr Ala Met Ser His Lys Gln Asn Cys  
 4915 4920 4925  
 Asn Cys Pro Phe His Leu His His Thr Phe Thr Pro Ser Asp Asn Glu  
 4930 4935 4940  
 His Leu Val Ser Ser Phe Ala Phe Ala Arg Pro Glu Val Ser Met Glu  
 4945 4950 4955 4960  
 Glu Ile Arg Ala Thr Pro Tyr Gln Ala Asn Lys Leu Ile Ser Asp Lys  
 4965 4970 4975  
 His Tyr Val Met Asn Met Ser Lys Ile Asp Ser Arg Val Thr Gly Ser  
 4980 4985 4990  
 Ser Leu Leu Lys Lys Val Ser Glu Trp Thr Glu Met Arg Met Asn Ser  
 4995 5000 5005  
 Asn Phe Asn Gly Thr Phe Glu Pro Ser Arg Leu Ala Leu Ser Asn Ser  
 5010 5015 5020  
 Gly Met Thr Thr Ala Gly Val Asn Leu Asp Val Ile Val Lys Pro Asn  
 5025 5030 5035 5040  
 Asn Ala Arg Ser Val Leu Gly Ile Cys His Arg Gln His Val Cys Thr  
 5045 5050 5055  
 Ala Asp Ala Lys Gly Thr Val Ala Ser Ala Met Pro Ala Val Phe Gln  
 5060 5065 5070  
 Ala Thr Asp Gly Asn Gly Asn Glu Ser Glu Leu Ile Gln Asn Ala Leu  
 5075 5080 5085  
 Pro Arg Asn Arg Tyr Ile Gln Lys Ser Thr Met Asn Ala Gln Thr Val  
 5090 5095 5100  
 Val Phe Ala Asn Val Leu Glu Gln Leu Ile Ala Asp Leu Gly Lys Val

5105		5110		5115		5120
Ile Val Asn Glu	Leu Ala Gly Thr	Ile Ala Glu Ser	Val Pro Glu Ser			
	5125		5130			5135
Val Tyr Glu Asn	Thr Lys Glu Met	Ile Asp Arg Leu	Gly Ser Asp Asp			
	5140		5145			5150
Leu Phe Lys Ser	Asn Asn Asn Gly	Gly Val Glu Ser	Met Asp Tyr Glu			
	5155		5160			5165
Asp Ser Glu Thr	Thr Ser Asn Asn	Gly Pro Val Leu	Ile Ser Glu Ala			
	5170		5175			5180
Met Lys Asn Ala	Val Tyr His Thr	Leu Ile Ser Gly	Lys Ala Ala Arg			
5185		5190		5195		5200
Pro Glu Asn Val	Pro Phe Ala Ser	Cys Ala Ser Gly	Pro Leu Ala Phe			
	5205		5210			5215
Asp Phe Leu Leu	Ser Lys Gly Asp	Thr Phe Glu Glu	Lys Asn Ala Glu			
	5220		5225			5230
Gln Gly Ala Ala	Ala Ala Val Ser	Ser Thr Tyr Ser	Ser Ser Ser Asn			
	5235		5240			5245
Thr Thr Leu Arg	Lys His Leu Ala	Arg Val Phe Glu	Ala Ile Ser Lys			
	5250		5255			5260
Gln Val Thr Asp	Ala Glu Phe Lys	Asp Ile Leu Asn	Asp Ile Glu Arg			
5265		5270		5275		5280
Asn Ile Ser Ser	Asp Tyr Thr Asn	Cys Pro Pro Asn	Thr Asn Gln Asn			
	5285		5290			5295
Ala Phe Ala Ile	Lys Arg Glu Phe	Ser Arg Ile Val	Ser Phe Leu Thr			
	5300		5305			5310
Ile Leu Arg Lys	Asn Ile Thr Pro	Ala Leu Val Asp	Pro Lys Gly Ala			
	5315		5320			5325
Leu His Glu Lys	Val Ala Ile Tyr	Leu Thr Leu Leu	Ser Thr Lys Ser			
	5330		5335			5340
Lys Leu Glu Asn	Phe Phe Gln Tyr	Gly Leu Ser Asn	Ser Ser Ser Val			
5345		5350		5355		5360
Asp Leu Ser His	Leu Lys Pro Ile	Asn Cys Ser Asn	Asn Val Lys Asn			
	5365		5370			5375
Ile Glu Asp Thr	Phe Met Tyr Arg	Asn Val His Pro	Ile Leu Ile Met			
	5380		5385			5390
Ala Leu Pro Glu	Asn Phe Thr Ala	Leu Leu Gln Gln	Glu Gln Met Asp			
	5395		5400			5405
Pro Asp Thr Ala	Ile Glu Ser Arg	Arg Ser Leu Thr	Thr Phe Leu Asn			
	5410		5415			5420
His Pro Asn Thr	Ala Ser Met Ala	Asn Gly Ala Arg	Ala Ala Val Gly			
5425		5430		5435		5440
Ala Gly Gly Gly	Asn Pro Met Gly	Leu Ser Ser His	Ile Leu His Glu			
	5445		5450			5455
Ser Thr Val Thr	Ser Asn Pro Val	Thr Thr Thr Glu	Asn Val			
	5460		5465			5470
Asn Tyr His Ser	Ser Val Thr Gln	Asp Pro Val Met	Val Val Asn Pro			
	5475		5480			5485
Phe Lys Asp Ser	Ala Arg Leu Ile	Val Asn Asn Asn	Asn Thr Gly Ile			
	5490		5495			5500
Asp Val Leu Asn	Asp Lys Ser Cys	Asn Tyr Leu Gln	Val Ser Met Pro			
5505		5510		5515		5520
Ser Glu Ser Ser	Gly Leu Val Thr	Asn Thr Gly Cys	Ser Ser Ser Ser			
	5525		5530			5535
Ser Ser Ser Ser	Ser Asp Thr Phe	Lys Tyr Val Arg	Arg Asp Asn Thr			
	5540		5545			5550
Pro Val Asn Leu	Pro Arg Val Thr	Pro Ala Val Leu	Cys Ser Asp Ala			
	5555		5560			5565
Ser Ser Asn Leu	Leu Asp Val Phe	Ser Arg Ala Asp	Ile Val Leu Glu			
	5570		5575			5580
Asn Met Asn Val	Arg Phe Gly Phe	Met Pro Glu Ile	Ile Ala Ala Val			
5585		5590		5595		5600

Ser Lys Phe Lys Gly Leu Thr Lys Glu Glu Val Ile Lys Gln Met Val  
 5605 5610 5615  
 Ser Gln Asn Asn Ile Asn Asn Asn Ser Asn Asn Asn Asn Gly Asn Gly  
 5620 5625 5630  
 Lys Lys Thr Thr Val Asp Pro Val Thr Gly Asp Ile Val Ile Thr Asn  
 5635 5640 5645  
 Ala Thr Phe Pro Asp Trp Leu Tyr Thr Ala Ala Asn Gly Gly Thr Ser  
 5650 5655 5660  
 Ser Phe Lys Trp Gly Asp Ile Asn Asp Arg Lys Met His Ala Lys Ala  
 5665 5670 5675 5680  
 Phe Pro Thr Phe Phe Ile Gly Asn Pro Thr Ala Ala Ala Thr Ala Asn  
 5685 5690 5695  
 Gly Val Pro Leu Thr Ser Glu Gly Ile Ser Leu Thr Glu Glu Lys Arg  
 5700 5705 5710  
 Lys Lys Ile Ala Gly Ile Ser Glu Gly Ser Ile Gly Thr Gly Ala Leu  
 5715 5720 5725  
 Arg Ala Ala Ala Asn Thr Arg Leu Ser Ser Asp Met Glu Pro Val Met  
 5730 5735 5740  
 Lys Gly Trp Asn Asn Ile Val Gln Leu Gln Gln Thr Phe Lys Lys Ala  
 5745 5750 5755 5760  
 Ser Asp Lys Leu Thr His Leu Leu Arg Ser Gly Gly Ile Pro Pro Arg  
 5765 5770 5775  
 Ser Gln Glu Thr Asn Ala Ile Ile Asn Lys Met His Asp Ser Phe Lys  
 5780 5785 5790  
 Thr Leu Glu Glu Cys Arg Arg Val Ile Gln Asp Glu Ala Ala Leu Leu  
 5795 5800 5805  
 Val Ala Thr Ser Asp Leu Leu Thr Gly Gly Tyr Gly Gly Asp Ala Ala  
 5810 5815 5820  
 Met Val Ser Pro Val Arg Pro Glu Met Thr Gly Leu Ile Gly Ala Ile  
 5825 5830 5835 5840  
 Ser Ala Pro Val Arg Gly Ile Ser His Leu Leu Lys Leu Gly Gly Val  
 5845 5850 5855  
 Ser Ala Ala Asn Ala Ala Ile Arg Lys Arg Leu Asn Leu Pro Thr Ser  
 5860 5865 5870  
 Asn Gly Lys Thr Leu Pro Glu His Gly Ile Val His Lys Ser Ala Lys  
 5875 5880 5885  
 Thr Leu Leu Leu Asp Ser Asp Ser Ile Ser Asn Leu Tyr Asn Thr Asp  
 5890 5895 5900  
 Leu Gln Asp Val Val Ser Asn Ala Arg Asp Asn Asn Asn Leu Gly Arg  
 5905 5910 5915 5920  
 Ile Met Gln Ser Leu Gly Leu Lys Gly Asn Asn Ala Gly Asp Leu Val  
 5925 5930 5935  
 Tyr Ser Ala Arg Gln Leu Thr Asp Leu Ile Thr Val Pro Glu Tyr Gly  
 5940 5945 5950  
 Asn Asn Arg Asp Leu Thr Lys Arg Gln Ala Ile Leu Lys Met Leu Ile  
 5955 5960 5965  
 Ser Asn Pro Glu Ile Asn Val Ala Asp Thr Ile Tyr Leu Thr Thr Gly  
 5970 5975 5980  
 Lys Asn Ala Pro Val Ser Ala Gln Glu Met Ala Cys Ala Ser Leu Thr  
 5985 5990 5995 6000  
 Val Gly Gly Ser Gly Gly Gly Lys Leu Ser Ser Asp Asp Asn Val Gln  
 6005 6010 6015  
 Ser Leu Asn Arg Leu Tyr Phe Arg Val  
 6020 6025

&lt;210&gt; 62

&lt;211&gt; 2190

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 62

```

atggataaag tttgtgttat atcaaatact agggagcgca cgtttaaggt acctgccgat 60
ctactgtgcg ttgcaacaga accggaaatc tctaccaagg aagaagatgc aggtatagaa 120
atcgagacaa gagtggtggt gttttcaagg tgcgtctcgg tccaggaact acatacaata 180
aatccaaatg atgaaggatt ttctgtccaa cttttcaagg actacctgaa attgcaatct 240
gcacaaggaa aaaaacccat tggtttgtac atccaaataa aggctggaga g gatccttgaa 300
aggagattaa tcagtggagg aactgcatac ctggatccgg caacacacct tttctatctt 360
gatttctccc ttaccctaa ttattcaata ttcaatgaca tttcatcccg tctgaaaatc 420
attgatgaag acacgtacaa tgggtgtgtt ttctctaaca gtgaagaaaa agagaaggat 480
gcactagtgc tgataagggt gactttttct acgcatgaaa aggcaattga agcagccata 540
aaaaaaataa tgctaaggaa agtggttttc aaggatggag atcttgattt cgggtactta 600
cgtataccaa aatctaaact ggacaaatct actccctatt ttcggagtca atacgggata 660
gtaaatgttg aaaaaatat ccctggttac atatggggag aaattatgaa gcaacgagtg 720
cgatgttcca gatgttacct ttacaacacc gactcggaat gggaatataa aaatgtggcc 780
gaagaaagag ttggacctcg ccagttagtg aaaaaatatg gtgccaagtg tgaaaaattta 840
tgtttttaggg acatagacct cagaaaaaag gaagcaaagg aaaaaaggga tatagaaaga 900
gaaactgaaa gcagatatgt ggtcgtaaca ctaaccata agcatgaaat gcctgaaaat 960
atgccctatt ttggaccaa gtgttcagtg gtgaggttg atgaaactag aatactttta 1020
tgttttgtgg atgaaatttc ttataatgat gaagatgtag acgaaatttt gtctgagaa 1080
agatcactaa gaaatgtttc tattagacat aaggaaaaatg tacctgtaca caggttatta 1140
aaaaaagggtg tgtctattca tgctagattt acccttaatg gtttgatga tgctttaata 1200
attttaaaga gaataccaaa aacttatttt gaagatgagg aactacaagc cgcttggtcg 1260
catgttaacc ttgaacagta cgaatggctt tgttctaata atagaggga taaagtagaa 1320
catgtaaagt cgcgggtagt gactcgagca gttaagcgta ggagaaaatg tagacactgg 1380
atttattttg ataaagacac tttaaattta aactacaaat actttgataa aaaagttact 1440
gctagtatgg catctaaaat atgtaatgca aaacacgact gtttagtttt ccatagaaaa 1500
atggaattgg aagatttgac tgagagcgca tatttcaagg tagaaccttc cccaataaat 1560
tttgccaagt taaaatcttg cccggatgtt aaatatgtgc agaaaaaac agatggtaca 1620
ttttctgtta taagattctt tagaaacatg acaaagggtg atcttattca aaggatggat 1680
cttttttgta ggtttattcc cgactcacac actattacac ttttgagtag ggcggatttt 1740
tatgcatgta aaagaggaga atctatgcat atgtgcacaa acaaacaccg tattcttcac 1800
tacaatttct ccaacgctcc ccacgagcc atcgaaacaa taaccaatat catcagtgt 1860
acaaggaggc gtaagggtat acacatagaa tacgcgatcg aaaatgtaca agaaatgtac 1920
gaagaagatg gaagaagata tgaagctaaa tacactggaa cttaaccga gtacaaaaga 1980
aatgaggaca aaaccttcaa atctcttctt gctcctcatt taacacctgt caacaaacca 2040
tataatatta accatttgta tgagcaatat ggaaattttg atgaagaatt agaagacaag 2100
ttgaggagtg gtttcatttc ttatgacacg tatgttactg caaaagacaa ctggggcgag 2160
tgtgcaactg gaaagggggc gtgcatctag

```

&lt;210&gt; 63

&lt;211&gt; 727

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 63

```

Met Asp Lys Val Cys Val Ile Ser Asn Thr Arg Glu Arg Thr Phe Lys
1          5          10          15
Val Pro Ala Asp Leu Leu Cys Val Ala Thr Glu Pro Glu Ile Ser Thr
20          25          30
Lys Glu Glu Asp Ala Gly Ile Glu Ile Glu Thr Arg Val Val Val Phe
35          40          45
Ser Arg Cys Val Ser Val Gln Glu Leu His Thr Ile Asn Pro Asn Asp
50          55          60
Glu Gly Phe Ser Val Gln Leu Phe Lys Asp Tyr Leu Lys Leu Gln Ser
65          70          75          80
Ala Gln Gly Lys Lys Pro Ile Gly Ile Gln Ile Lys Ala Gly Glu Asp
85          90          95
Leu Glu Arg Arg Leu Ile Ser Gly Gly Thr Ala Tyr Leu Asp Pro Ala
100          105          110
Thr His Leu Phe Tyr Leu Asp Phe Ser Leu Tyr Pro Asn Tyr Ser Ile
115          120          125

```



WO 01/38351

PCT/US00/28888

157

Phe	Asn	Asp	Ile	Ser	Ser	Arg	Leu	Lys	Ile	Ile	Asp	Glu	Asp	Thr	Tyr
130						135					140				
Asn	Gly	Val	Val	Phe	Ser	Asn	Ser	Glu	Glu	Lys	Glu	Lys	Asp	Ala	Leu
145					150					155					160
Val	Leu	Ile	Arg	Val	Thr	Phe	Ser	Thr	His	Glu	Lys	Ala	Ile	Glu	Ala
				165					170						175
Ala	Ile	Lys	Lys	Ile	Met	Leu	Arg	Lys	Val	Phe	Phe	Lys	Asp	Gly	Asp
			180					185					190		
Leu	Asp	Phe	Gly	Tyr	Leu	Arg	Ile	Pro	Lys	Ser	Lys	Leu	Asp	Lys	Phe
	195						200					205			
Thr	Pro	Tyr	Phe	Arg	Ser	Gln	Tyr	Gly	Ile	Val	Asn	Val	Glu	Lys	Asn
	210					215					220				
Ile	Pro	Gly	Tyr	Ile	Trp	Gly	Glu	Ile	Met	Lys	Gln	Arg	Val	Arg	Cys
225					230					235					240
Ser	Arg	Trp	Tyr	Leu	Tyr	Asn	Thr	Asp	Ser	Glu	Trp	Glu	Tyr	Lys	Asn
				245					250					255	
Val	Ala	Glu	Glu	Arg	Val	Gly	Pro	Arg	Gln	Leu	Val	Lys	Lys	Tyr	Gly
			260					265					270		
Ala	Lys	Cys	Glu	Asn	Leu	Cys	Phe	Arg	Asp	Ile	Asp	Leu	Arg	Lys	Lys
	275						280					285			
Glu	Ala	Lys	Glu	Lys	Arg	Asp	Ile	Glu	Arg	Glu	Thr	Glu	Ser	Arg	Tyr
	290					295					300				
Val	Val	Val	Thr	Leu	Thr	His	Lys	His	Glu	Met	Pro	Glu	Asn	Met	Pro
305					310					315					320
Tyr	Phe	Gly	Pro	Lys	Cys	Ser	Val	Val	Arg	Leu	Asp	Glu	Thr	Arg	Ile
				325					330					335	
Leu	Leu	Cys	Phe	Val	Asp	Glu	Ile	Ser	Tyr	Asn	Asp	Glu	Asp	Val	Asp
			340					345					350		
Glu	Ile	Leu	Ser	Glu	Asn	Arg	Ser	Leu	Arg	Asn	Val	Ser	Ile	Arg	His
	355						360					365			
Lys	Glu	Asn	Val	Pro	Val	His	Thr	Leu	Leu	Lys	Lys	Gly	Val	Ser	Ile
	370						375					380			
His	Ala	Arg	Phe	Thr	Leu	Asn	Gly	Leu	Asp	Asp	Ala	Leu	Ile	Ile	Leu
385					390					395					400
Lys	Arg	Ile	Pro	Lys	Thr	Tyr	Phe	Glu	Asp	Glu	Glu	Leu	Gln	Ala	Ala
				405					410					415	
Cys	Ala	His	Val	Asn	Leu	Glu	Gln	Tyr	Glu	Trp	Leu	Cys	Ser	Asn	Asn
			420					425					430		
Arg	Gly	Asn	Lys	Val	Glu	His	Val	Lys	Ser	Arg	Val	Val	Thr	Arg	Ala
			435				440					445			
Val	Lys	Arg	Arg	Arg	Lys	Cys	Arg	His	Trp	Ile	Tyr	Phe	Asp	Lys	Asp
	450					455					460				
Thr	Leu	Asn	Leu	Asn	Tyr	Lys	Tyr	Phe	Asp	Lys	Lys	Val	Thr	Ala	Ser
465					470					475					480
Met	Ala	Ser	Lys	Ile	Cys	Asn	Ala	Lys	His	Asp	Cys	Leu	Val	Phe	His
				485					490					495	
Arg	Lys	Met	Glu	Leu	Glu	Asp	Leu	Thr	Glu	Ser	Ala	Tyr	Phe	Lys	Val
			500					505					510		
Glu	Pro	Ser	Pro	Ile	Asn	Phe	Ala	Lys	Leu	Lys	Ser	Cys	Pro	Asp	Val
			515				520					525			
Lys	Tyr	Val	Gln	Lys	Lys	Thr	Asp	Gly	Thr	Phe	Ser	Val	Ile	Arg	Phe
	530					535					540				
Phe	Arg	Asn	Met	Thr	Lys	Gly	Asp	Leu	Ile	Gln	Arg	Met	Asp	Leu	Phe
545					550					555					560
Cys	Arg	Phe	Ile	Pro	Asp	Ser	His	Thr	Ile	Thr	Leu	Leu	Ser	Arg	Ala
				565					570					575	
Asp	Phe	Tyr	Ala	Cys	Lys	Arg	Gly	Glu	Ser	Met	His	Met	Cys	Thr	Asn
			580					585					590		
Lys	His	Arg	Ile	Leu	His	Tyr	Lys	Phe	Ser	Asn	Ala	Pro	His	Ala	Ala
			595				600					605			
Ile	Glu	Gln	Ile	Thr	Asn	Ile	Ile	Ser	Asp	Thr	Arg	Gly	Arg	Lys	Gly

610 615 620  
 Ile His Ile Glu Tyr Ala Ile Glu Asn Val Gln Glu Met Tyr Glu Glu  
 625 630 635 640  
 Asp Gly Arg Arg Tyr Glu Ala Lys Tyr Thr Gly Thr Leu Thr Glu Tyr  
 645 650 655  
 Lys Arg Asn Glu Asp Lys Thr Phe Lys Ser Leu Leu Ala Pro His Leu  
 660 665 670  
 Thr Pro Val Asn Lys Pro Tyr Asn Ile Asn His Leu Tyr Glu Gln Tyr  
 675 680 685  
 Gly Asn Phe Asp Glu Glu Leu Glu Asp Lys Leu Arg Ser Gly Phe Ile  
 690 695 700  
 Ser Tyr Asp Thr Tyr Val Thr Ala Lys Asp Asn Trp Gly Arg Cys Ala  
 705 710 715 720  
 Thr Gly Lys Gly Ala Cys Ile  
 725

<210> 64  
 <211> 966  
 <212> DNA  
 <213> SHRIMP

<400> 64  
 atgtgcacat taaaaacata caaaatgact acttcaacag aaatatcaaa gaacctttca 60  
 gatgtgttat ccatcaaggc aactggagat tgggtgcagta atatcaagac ggtattttca 120  
 cccttcacag aaggcaagg aaatttacca aacagtctcc cgtttacgag aagtcccaat 180  
 acaacatgtg gttcaagaga ggcggaacac gccacagagc attttatcac cgtctttgca 240  
 aaggacaaat atgagcggaa aagagtaaaa cgtacaatcg gattcaccct cgacaacaca 300  
 aaggagttga cgcccaacag atacttggtg gcagatgtat actcttggca agaagagaaa 360  
 atggtgtttg aaggattttg tgtcccacca ggaaagtcgg gaacatttgt acgctactct 420  
 aatgaagata aaagttttct actagcagat accggaagat atatgaaaaa gaagtacgat 480  
 gatccagaaa ataagaccag tagtgggggt gatgatgacg atgacgacga tgatgatgat 540  
 gacgacaaca acaatgttga cgtgtatgaa gaaaacgacc ccagaaatgt attcgagggtc 600  
 gaaaaggatg aaaaaatatgc ctgtactttt tcaatttttg tctatagagc aatgaaaaag 660  
 tctcctcctg tatgtagagg gttattagta gagacagatg gaccctcatc tcaccctaaa 720  
 cgggccccgt cagcatttaa tccattcgga ggaagttcta tggtgaacgg ttatggtgca 780  
 ggtgcagatg cactagaaga agaggatgaa gttgatggag ttcctgaaag agagaggatt 840  
 acaaattttg ctctcaagag aggacctgca actggccaga actttgtatc tgttaaactg 900  
 gaacatgatg gatctaaagc agacctgtac aacgtcacgt gcttctccaa gcagcgtgga 960  
 gataa 966

<210> 65  
 <211> 321  
 <212> PRT  
 <213> SHRIMP

<400> 65  
 Met Cys Thr Leu Lys Thr Tyr Lys Met Thr Thr Ser Thr Glu Ile Ser  
 1 5 10 15  
 Lys Asn Leu Ser Asp Val Leu Ser Ile Lys Ala Thr Gly Asp Trp Cys  
 20 25 30  
 Ser Asn Ile Lys Thr Val Phe Ser Pro Phe Thr Glu Gly Lys Gly Asn  
 35 40 45  
 Leu Pro Asn Ser Leu Pro Phe Thr Arg Ser Pro Asn Thr Thr Cys Gly  
 50 55 60  
 Ser Arg Glu Ala Ala Asn Ala Thr Glu His Phe Ile Thr Val Phe Ala  
 65 70 75 80  
 Lys Asp Lys Tyr Glu Arg Lys Arg Val Lys Arg Thr Ile Gly Phe Thr  
 85 90 95  
 Leu Asp Asn Thr Lys Glu Leu Thr Pro Asn Arg Tyr Leu Val Ala Asp  
 100 105 110

Val	Tyr	Ser	Trp	Gln	Glu	Glu	Lys	Met	Val	Phe	Glu	Gly	Phe	Cys	Val
	115						120					125			
Pro	Pro	Gly	Lys	Ser	Gly	Thr	Phe	Val	Arg	Tyr	Ser	Asn	Glu	Asp	Lys
	130					135					140				
Ser	Phe	Leu	Leu	Ala	Asp	Thr	Gly	Arg	Tyr	Met	Lys	Lys	Lys	Tyr	Asp
145					150					155					160
Asp	Pro	Glu	Asn	Lys	Thr	Ser	Ser	Gly	Gly	Asp	Asp	Asp	Asp	Asp	Asp
			165					170						175	
Asp	Asp	Asp	Asp	Asp	Asp	Asn	Asn	Asn	Val	Asp	Val	Tyr	Glu	Glu	Asn
			180					185					190		
Asp	Pro	Arg	Asn	Val	Phe	Glu	Val	Glu	Lys	Asp	Glu	Lys	Tyr	Ala	Cys
	195						200					205			
Thr	Phe	Ser	Ile	Leu	Val	Tyr	Arg	Ala	Met	Lys	Lys	Ser	Pro	Pro	Val
	210					215						220			
Cys	Arg	Gly	Leu	Leu	Val	Glu	Thr	Asp	Gly	Pro	Ser	Ser	His	Pro	Lys
225					230					235					240
Arg	Ala	Pro	Ser	Ala	Phe	Asn	Pro	Phe	Gly	Gly	Ser	Ser	Met	Leu	Asn
				245					250					255	
Gly	Tyr	Gly	Ala	Gly	Ala	Asp	Ala	Leu	Glu	Glu	Glu	Asp	Glu	Val	Asp
			260					265					270		
Gly	Val	Pro	Glu	Arg	Glu	Arg	Ile	Thr	Asn	Phe	Ala	Leu	Lys	Arg	Gly
	275						280					285			
Pro	Ala	Thr	Gly	Gln	Asn	Phe	Val	Ser	Val	Lys	Leu	Glu	His	Asp	Gly
	290				295						300				
Ser	Lys	Ala	Asp	Leu	Tyr	Asn	Val	Thr	Cys	Phe	Ser	Lys	Gln	Arg	Gly
305				310						315					320
Val															

<210> 66  
 <211> 1197  
 <212> DNA  
 <213> SHRIMP

<400> 66  
 atgcaactca ttcttttctca tcatctaaccc atggctgggtc gtgtagagct cgtcactgga 60  
 cccatgtttg cgggcaagtc tacctacctg aaaaacatat accaacaaga aaatggaggc 120  
 aataaacatt gcctgtttgt caaacactcc ctagaaacta ggtacggttg tggaactgga 180  
 acaatagtca ctcatgccgg agaagtgatt gaaggttgta ctacagtttc ttctatcaag 240  
 gaactaatca gtgtgttacc agaagttgtg gatgtgattc tcattgacga agggcaattc 300  
 ttcacggatt tgggtgctagt caatagactg gctgacaagg ggaaaaggat tgtgattgca 360  
 gcacttgatg gaacttctga ccagcaaatg ttcagtccta ttcataagct attgccttat 420  
 acaaattcca ttgttaagct agcatctaaa tgtatgattt gtaaaattga taccaaagaa 480  
 gctcctttta ctgtaagggt tggtaatgac aatgataata atgttatatg tgtaggagga 540  
 gctgaaatgt acgctgctgc ctgccgggac tgttacaaaa aaattaacaa gaaaaagaac 600  
 aaggggaaac ttgttgtact tgaaggaggt gacaggtgct gtaagagtac ccaagccaaa 660  
 ctcttggtga ccaataaaaa ctgcctctt tatggaggag aatatatgtg ctttcccgac 720  
 aggagcagcc atacgggtaa actcatcaat gattatttaa ctaagaaaat tgaactagat 780  
 gatcatgcag ctcaactgtt attttctgca aatagatggg aagttttag taaaattaag 840  
 cagttgttag acgatggaat ccatgttgtg atggatagat attactactc ggggattggt 900  
 ttctctttag ctagaggagt ggataccggt gagtgggtgct ctgctagcga tgagggactt 960  
 cctcagcccg atcttgattt gttgatgctt ttagatgttg aaaagtgtc aaatagggat 1020  
 acttttggtg tcgaaagatt tgagacaaat tccattcaag aacgtgctag agccctattc 1080  
 ctagacctcg caaataagga cgaaaagaat gtatggatta aggtagacgc tcgcggcacc 1140  
 attgaggagg tgcaaacata aattataaat attgtatata atattgttga agaataa 1197

<210> 67  
 <211> 394  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 67

```

Met Gln Leu Ile Leu Ser His His Leu Thr Met Ala Gly Arg Val Glu
 1          5          10          15
Leu Val Thr Gly Pro Met Phe Ala Gly Lys Ser Thr Tyr Leu Lys Asn
 20          25          30
Ile Tyr Gln Gln Glu Asn Gly Gly Asn Lys His Cys Leu Phe Val Lys
 35          40          45
His Ser Leu Glu Thr Arg Tyr Gly Cys Gly Thr Gly Thr Ile Val Thr
 50          55          60
His Ala Gly Glu Val Ile Glu Gly Cys Thr Thr Val Ser Ser Ile Lys
 65          70          75          80
Glu Leu Ile Ser Val Leu Pro Glu Val Val Asp Val Ile Leu Ile Asp
 85          90          95
Glu Gly Gln Phe Phe Thr Asp Leu Val Leu Val Asn Arg Leu Ala Asp
100          105          110
Lys Gly Lys Arg Ile Val Ile Ala Ala Leu Asp Gly Thr Ser Asp Gln
115          120          125
Gln Met Phe Ser Pro Ile His Lys Leu Leu Pro Tyr Thr Asn Ser Ile
130          135          140
Val Lys Leu Ala Ser Lys Cys Met Ile Cys Lys Ile Asp Thr Lys Glu
145          150          155          160
Ala Pro Phe Thr Val Arg Phe Gly Asn Asp Asn Asp Asn Asn Val Ile
165          170          175
Cys Val Gly Gly Ala Glu Met Tyr Ala Ala Ala Cys Arg Asp Cys Tyr
180          185          190
Lys Lys Ile Asn Lys Lys Lys Asn Lys Gly Lys Leu Val Val Leu Glu
195          200          205
Gly Gly Asp Arg Cys Gly Lys Ser Thr Gln Ala Lys Leu Leu Leu Thr
210          215          220
Asn Lys Asn Ser Pro Leu Tyr Gly Gly Glu Tyr Met Cys Phe Pro Asp
225          230          235          240
Arg Ser Ser His Thr Gly Lys Leu Ile Asn Asp Tyr Leu Thr Lys Lys
245          250          255
Ile Glu Leu Asp Asp His Ala Ala His Leu Leu Phe Ser Ala Asn Arg
260          265          270
Trp Glu Val Cys Ser Lys Ile Lys Gln Leu Leu Asp Asp Gly Ile His
275          280          285
Val Val Met Asp Arg Tyr Tyr Tyr Ser Gly Ile Val Phe Ser Leu Arg
290          295          300
Val Asp Thr Val Glu Trp Cys Ser Ala Ser Asp Glu Gly Leu Pro Gln
305          310          315          320
Pro Asp Leu Val Leu Met Leu Leu Asp Val Glu Lys Cys Ser Asn
325          330          335
Arg Asp Thr Phe Gly Val Glu Arg Phe Glu Thr Asn Ser Ile Gln Glu
340          345          350
Arg Ala Arg Ala Leu Phe Leu Asp Leu Ala Asn Lys Asp Glu Lys Asn
355          360          365
Val Trp Ile Lys Val Asp Arg Thr Ile Glu Glu Val Gln Thr Lys Ile
370          375          380
Ile Asn Ile Val Tyr Asn Ile Val Glu Glu
385          390

```

&lt;210&gt; 68

&lt;211&gt; 486

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 68

atgttaccta gaaagacttt gcccgacact gaaaatgggtt atttgtctt ggacgagtct 60

WO 01/38351

PCT/US00/28888

161

```

cttctggaga aggtgtacta tgataacaac aatgaactga ttgtaagagt tgggtgggatt 120
tatatgcaga tatgcaagtc aaaatacatc ttccatcacg atgatccaga gaggttcttt 180
tatagtgtgt tggaggatta tcaccccatc aaagagattg ttgaacgact agcagaagag 240
gatggggtat ttttaggacc gtgggagttt ttatcgcgca aacaagtga cctccaacac 300
gggtgctaca aagctctttt gtcattgcc aaggacaaat attgtaacct attattacc 360
cagcaaatga aaaccaacct ggaaaaaatg gaagaaatac agcgtactag actcattcac 420
tctagaacgt acaatacacc ccagatagaa ttgtctgacc agctagatgg atgtgttata 480
tgtaa                                           486

```

<210> 69  
 <211> 161  
 <212> PRT  
 <213> SHRIMP

```

<400> 69
Met Leu Pro Arg Lys Thr Leu Pro Asp Thr Glu Asn Gly Tyr Phe Val
1      5      10      15
Leu Asp Glu Ser Leu Leu Glu Lys Val Tyr Tyr Asp Asn Asn Asn Glu
20      25      30
Leu Ile Val Arg Val Gly Gly Ile Tyr Met Gln Ile Cys Lys Ser Lys
35      40      45
Tyr Ile Phe His His Asp Asp Pro Glu Arg Phe Phe Tyr Ser Val Leu
50      55      60
Glu Asp Tyr His Pro Ile Lys Glu Ile Val Glu Arg Leu Ala Glu Glu
65      70      75      80
Asp Gly Val Phe Leu Gly Pro Trp Glu Phe Leu Ser Arg Lys Gln Val
85      90      95
Asn Leu Gln His Gly Cys Tyr Lys Ala Leu Leu Ser Leu Pro Glu Asp
100     105     110
Lys Tyr Cys Asn Leu Leu Leu Pro Gln Gln Met Lys Thr Asn Leu Glu
115     120     125
Lys Met Glu Glu Ile Gln Arg Thr Arg Leu Ile His Ser Arg Thr Tyr
130     135     140
Asn Thr Pro Gln Ile Glu Leu Ser Asp Gln Leu Asp Gly Cys Val Ile
145     150     155     160
Cys

```

<210> 70  
 <211> 1926  
 <212> DNA  
 <213> SHRIMP

```

<400> 70
atggttgctt caactccgtg tccaggccca ggaccagttc caacccaaga acttctttct 60
acaaactttc ttgaagctca caagcttgct gtggaacttc ttctcccgtc ctacagtagt 120
gatgtagttt attgtgactc tgagacgtac accaaacct aaccgatttt tgggaacaag 180
agtatagttt ctaccattgg agactatgtc ttatcaaacc ccaatgaaga tgtgagttac 240
caaatggttt cttccgtctt agaaaaattt cccttgctat tccactgcac ttataagacg 300
aatgaagaag ataaagggtat tcctctgtgg aagaagttgt acaacaaaag aaaattcaaa 360
ctcctcaact cattgttggt tcataacaac aagaactgga ctctgttcc agctatccc 420
tttgacaggg agaatatatg tgatgcttca ggaaggagt ttcttatgag tgaaataatg 480
tccacgtcaa ctttcagac aatttgcaa aacaacacac attacttgtt tgatatgtta 540
aatatggaac gtggcaaaca aggaggagt tttcttcact tctttgcac taggaagaat 600
tcttttacta actttgaaa tgaagaaatg gactctcatg tgctcagtaa catagcgaaa 660
ttcatatgca atgaaaagga aaactagac tctttcatac ctgccaacg aaaaatacca 720
tgccctgata aaactaatga tgaagggtac atcccgtgg aaatagcaat tatggaagac 780
aattaccctg cattgtata tctcgtttgt aggtatggag catcttgggc aaacacatac 840
ggggatcata atgaatctct caaagcgttt gcaataagaa atgatgcaa agattgtctg 900
gaaattatag agtttataag tgatcactac agtttcaaca aaaatgtgac gaaggaagaa 960

```

```

tttggttaaag agaagactgt agaatgtgtt ggatgtttat atgatattga agacgagaaa 1020
cgttgtttaca aactcccatg tggacatttc atgcatacat ttgcttgtc taataagtgt 1080
tctaaagcta acttttagatg tggttaaagt ttccaaacct ttgatgacac aatttttaga 1140
aaatgtcccc caactataca atggaaaatg ggtataaacc aaacgactaa ccataaggaa 1200
atggatttgt tcaatcgtgc atttgacaca tatttagatt ttatttgctc atataacgctc 1260
aaattagaca aaaaatcaaa acctaaacac aaacctgaaa acaaaaaggt ggaagaagaa 1320
ctagcaaaaa ggacagcaga aattgaagag gccataaaga aaaaggaaga agaactagca 1380
aaaaggacag cagaaattga agaggccata aagaaaaagg aagaagaact agcaaaaagg 1440
acagcagaaa ttgaagaggc catgaagaaa aaggaagaag aagaactctc aaaatataat 1500
aaaataattg aaaagggaaa aagacgactg aatgaagaat gtgtcaagct gagagatatt 1560
tcaactgcag ccataaacat gtacaaagag aaagtgaaga ttaatggtgt attactaaaa 1620
gattccgatc aggagtgtgc tgaggcgaaa gagagggtga ggaaaatttt attgctagaa 1680
gaagaacaaa aacttgacag atttttgttt agaccgaaac gagtagaaga acgtatattc 1740
ctaactaaaag atgatgaaac gttagccttc aagttagccc tagaaaagaa aacggaggac 1800
ataattgcga agaaaaacaa ccaaaaaggc agtgaaagaa gagatggaga atatactata 1860
acttctcata ttgagaaact acctcaatcc actgctttgg ctagtgtgtg tgtgttaaac 1920
gaataa                                     1926

```

<210> 71  
<211> 637  
<212> PRT  
<213> SHRIMP

<400> 71

```

Met Val Ala Ser Thr Pro Cys Pro Gly Pro Gly Pro Val Pro Thr Gln
1          5          10          15
Glu Leu Leu Ser Thr Asn Phe Leu Glu Ala His Lys Leu Val Val Glu
20         25         30
Leu Leu Leu Pro Ser Tyr Ser Ser Asp Val Val Tyr Cys Asp Ser Glu
35         40         45
Thr Tyr Thr Lys Pro Ile Pro Ile Phe Gly Asn Lys Ser Ile Val Ser
50         55         60
Thr Ile Gly Asp Tyr Val Leu Ser Asn Pro Asn Glu Asp Val Ser Tyr
65         70         75         80
Gln Met Val Ser Ser Val Leu Glu Lys Phe Pro Leu Leu Phe His Cys
85         90         95
Thr Tyr Lys Thr Asn Glu Glu Asp Lys Gly Ile Pro Leu Trp Lys Lys
100        105        110
Leu Tyr Asn Lys Arg Lys Phe Lys Leu Leu Asn Ser Leu Leu Val His
115        120        125
Asn Asn Lys Asn Trp Thr Pro Val Pro Ala Ile Pro Phe Asp Arg Glu
130        135        140
Asn Ile Cys Asp Ala Ser Gly Arg Ser Val Leu Met Ser Glu Ile Met
145        150        155        160
Ser Thr Ser Thr Phe Gln Thr Ile Cys Lys Asn Asn Thr His Tyr Leu
165        170        175
Phe Asp Met Leu Asn Met Glu Arg Gly Lys Gln Gly Gly Ser Phe Leu
180        185        190
His Phe Phe Ala Ser Arg Lys Asn Ser Phe Thr Asn Phe Glu Asn Glu
195        200        205
Glu Met Asp Ser His Val Leu Ser Asn Ile Ala Lys Phe Ile Cys Asn
210        215        220
Glu Lys Glu Lys Leu Asp Ser Phe Ile Pro Ala Asn Gly Lys Ile Pro
225        230        235        240
Cys Pro Asp Lys Thr Asn Asp Glu Gly Tyr Ile Pro Leu Glu Ile Ala
245        250        255
Ile Met Glu Asp Asn Tyr Pro Ala Leu Leu Tyr Leu Val Cys Arg Tyr
260        265        270
Gly Ala Ser Trp Ala Asn Thr Tyr Gly Asp His Asn Glu Ser Leu Lys
275        280        285
Ala Phe Ala Ile Arg Asn Asp Ala Lys Asp Cys Leu Glu Ile Ile Glu

```

290		295		300
Phe Ile Ser Asp His Tyr	Ser Phe Asn Lys Asn	Val Thr Lys Glu Glu		
305	310	315	320	
Phe Val Lys Glu Lys Thr	Val Glu Cys Val Gly	Cys Leu Tyr Asp Ile		
	325	330	335	
Glu Asp Glu Lys Arg Cys Tyr	Lys Leu Pro Cys Gly	His Phe Met His		
	340	345	350	
Thr Phe Cys Leu Ser Asn Lys	Cys Ser Lys Ala Asn	Phe Arg Cys Val		
	355	360	365	
Lys Cys Phe Gln Thr Phe Asp	Asp Thr Ile Phe Arg	Lys Cys Pro Pro		
	370	375	380	
Thr Ile Gln Trp Lys Met Gly	Ile Asn Gln Thr Thr	Asn His Lys Glu		
385	390	395	400	
Met Asp Leu Phe Asn Arg Ala	Phe Asp Thr Tyr Leu	Asp Phe Ile Cys		
	405	410	415	
Ser Tyr Asn Val Lys Leu Asp	Lys Lys Ser Lys Pro	Lys His Lys Pro		
	420	425	430	
Glu Asn Lys Lys Val Glu Glu	Glu Leu Ala Lys Arg	Thr Ala Glu Ile		
	435	440	445	
Glu Glu Ala Ile Lys Lys Lys	Glu Glu Glu Leu Ala	Lys Arg Thr Ala		
	450	455	460	
Glu Ile Glu Glu Ala Ile Lys	Lys Lys Lys Glu Glu	Glu Leu Ala Lys Arg		
465	470	475	480	
Thr Ala Glu Ile Glu Glu Ala	Met Lys Lys Glu Glu	Glu Glu Glu Leu		
	485	490	495	
Ser Lys Tyr Asn Lys Ile Ile	Glu Lys Gly Lys Arg	Arg Arg Leu Asn Glu		
	500	505	510	
Glu Cys Val Lys Leu Arg Asp	Ile Ser Thr Ala Ala	Ile Asn Met Tyr		
	515	520	525	
Lys Glu Lys Val Arg Ile Asn	Gly Val Leu Leu Lys	Asp Ser Asp Gln		
	530	535	540	
Glu Leu Ala Glu Ala Lys Glu	Arg Leu Arg Lys Ile	Leu Leu Leu Glu		
545	550	555	560	
Glu Glu Thr Lys Leu Asp Arg	Phe Leu Phe Arg Pro	Lys Arg Val Glu		
	565	570	575	
Glu Arg Ile Phe Leu Thr Lys	Asp Asp Glu Thr Leu	Ala Phe Lys Leu		
	580	585	590	
Ala Leu Glu Lys Lys Thr Glu	Asp Ile Ile Ala Lys	Lys Asn Asn Gln		
	595	600	605	
Lys Gly Ser Arg Asp Gly Glu	Tyr Thr Ile Thr Ser	His Ile Glu Lys		
	610	615	620	
Leu Pro Gln Ser Thr Ala Ser	Val Cys Val Leu Asn	Glu		
625	630	635		

<210> 72  
 <211> 780  
 <212> DNA  
 <213> SHRIMP

<400> 72  
 atgtctactt gttcgaattt gttgtcagta tttggtggag gagattggac aacaacattc 60  
 ccattcgacc tcgtccatac acgtcaagag tgtgataaaa agagagagca agactactca 120  
 tttttcatta ctgaaacgtg taaaggagag aatatttgta tacattcgta tgaacacacg 180  
 tcaaagatta ttgacacggg taataatgat tctacctcaa tagaggaact agaagtactg 240  
 aatatataca aagctataaa ccatttagaa aatatcctaa aactcaacaa aggagaaaaa 300  
 attatactga tggatgtaga aacaatgata ctggaaactc ataaaaatattt aatgaaaggg 360  
 attcttccca agggtaaaaa tggaagtttc agtacatgag tacgctttgc tgtaaataag 420  
 aacaatgaac ggcattacta ccctgtatatt gaaacagaga aagaagcggt caattctata 480  
 caaaatctag tagattatta taatgaaatt gtagctcaca ccaatgacca aattaaaaata 540  
 ataaaagcgt gcgcatatatt catgtacaac tttctaactc tccacccttt caatgatggt 600

aatggaagaa cagctagatt attgtatagt tttctattga aaggtaatgg tatcgtacct 660  
 catttttcac ccataacaca ccctagggat caatttgttg atacttttagt gtatttttaga 720  
 gaacatggag atggacgacc tttattgtat gttttgctgg aatcaataaa aaataagtaa 780

<210> 73  
 <211> 255  
 <212> PRT  
 <213> SHRIMP

<400> 73  
 Met Ser Thr Cys Ser Asn Leu Leu Ser Val Phe Gly Gly Gly Asp Trp  
 1 5 10 15  
 Thr Thr Thr Phe Pro Phe Asp Leu Val His Thr Arg Gln Glu Cys Asp  
 20 25 30  
 Lys Lys Arg Glu Gln Asp Tyr Ser Phe Phe Ile Thr Glu Thr Cys Lys  
 35 40 45  
 Gly Glu Asn Ile Gly Ile His Ser Tyr Glu His Thr Ser Lys Ile Ile  
 50 55 60  
 Asp Thr Gly Asn Asn Asp Ser Thr Ser Ile Glu Glu Leu Glu Val Leu  
 65 70 75 80  
 Asn Ile Tyr Lys Ala Ile Asn His Leu Glu Asn Ile Leu Lys Leu Asn  
 85 90 95  
 Lys Gly Glu Lys Ile Ile Leu Met Asp Val Glu Thr Met Ile Thr His  
 100 105 110  
 Lys Ile Leu Met Lys Gly Ile Leu Pro Lys Gly Lys Asn Gly Ser Phe  
 115 120 125  
 Ser Thr Cys Val Arg Phe Ala Val Asn Lys Asn Asn Glu Arg His Tyr  
 130 135 140  
 Tyr Pro Val Phe Glu Thr Glu Lys Glu Ala Phe Asn Ser Ile Gln Asn  
 145 150 155 160  
 Leu Val Asp Tyr Tyr Asn Glu Ile Val Ala His Thr Asn Asp Gln Ile  
 165 170 175  
 Lys Ile Ile Lys Ala Cys Ala Tyr Phe Met Tyr Asn Phe Leu Thr Leu  
 180 185 190  
 His Pro Phe Asn Asp Gly Asn Gly Arg Thr Ala Arg Leu Lys Phe Leu  
 195 200 205  
 Leu Lys Gly Asn Gly Ile Val Pro His Phe Ser Pro Ile Thr His Pro  
 210 215 220  
 Arg Asp Gln Phe Val Asp Thr Leu Val Tyr Phe Arg Glu His Gly Asp  
 225 230 235 240  
 Gly Arg Pro Leu Leu Tyr Val Leu Leu Glu Ser Ile Lys Asn Lys  
 245 250 255

<210> 74  
 <211> 480  
 <212> DNA  
 <213> SHRIMP

<400> 74  
 atggaggacc taaaatccac tatcgagaga gtatatgaag aaagagtgga gaatctagaa 60  
 caatggacaa atactgtaga ggaagaagaa aggactgtct cagcaatcga ttctgtcctg 120  
 gaggaacaaa aaagggccct ggacgcatgg gaagcagcga taaaggaacg agaaaacgac 180  
 ctgcagtaa aagaagggat atctgcactc gttttcaacg cagcagacgc caaaacacgt 240  
 aaagaattga taaatacgtg gatagccgaa agggaaacgt cagaaaaaag aagaaaggaa 300  
 gcaacctcta ccaataatca actgaagaac cagatgtcat ctctagtcaa cacaaccaa 360  
 acactcaaag aaaagtacaa caaatattac agaagaagtg ccataactcaa catgcaatac 420  
 atcaataaca aaagggatta tgaagcaagt caattttggg tgtatacaaa caatgcataa 480



WO 01/38351

PCT/US00/28888

165

<210> 75  
 <211> 159  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 75

Met	Glu	Asp	Leu	Lys	Ser	Thr	Ile	Glu	Arg	Val	Tyr	Glu	Glu	Arg	Val
1				5					10					15	
Glu	Asn	Leu	Glu	Gln	Trp	Thr	Asn	Thr	Val	Glu	Glu	Glu	Glu	Arg	Thr
		20					25						30		
Val	Ser	Ala	Ile	Asp	Ser	Val	Leu	Glu	Glu	Gln	Lys	Arg	Ala	Leu	Asp
		35					40					45			
Ala	Trp	Glu	Ala	Ala	Ile	Lys	Glu	Arg	Glu	Asn	Asp	Leu	Ala	Val	Lys
	50					55				60					
Glu	Gly	Ile	Ser	Ala	Leu	Val	Phe	Asn	Ala	Ala	Asp	Ala	Lys	Thr	Arg
65					70				75					80	
Lys	Glu	Leu	Ile	Asn	Thr	Trp	Ile	Ala	Glu	Arg	Glu	Thr	Ser	Glu	Lys
				85					90					95	
Arg	Arg	Lys	Glu	Ala	Thr	Ser	Thr	Asn	Asn	Gln	Leu	Lys	Asn	Gln	Met
			100					105					110		
Ser	Ser	Leu	Val	Asn	Thr	Thr	Lys	Thr	Leu	Lys	Glu	Lys	Tyr	Asn	Lys
		115					120					125			
Tyr	Tyr	Arg	Arg	Ser	Ala	Ile	Leu	Asn	Met	Gln	Tyr	Ile	Asn	Asn	Lys
	130					135					140				
Arg	Asp	Tyr	Glu	Ala	Ser	Gln	Phe	Trp	Val	Tyr	Thr	Asn	Asn	Ala	
145					150					155					

<210> 76  
 <211> 321  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 76

atgcataagt	tttcaaataa	atattatattt	ataataaaag	gtgtttttaat	tataatttttt	60
gtccctgatg	ttgtgttttc	tatatatttta	ctgcctcctc	ttggggtaag	acataaaaaac	120
ggtggcggcg	gaaacgagga	acagaagagc	ggacccagcc	agaagcatca	tatccctggt	180
cctgttctta	tatttgtcct	catcatcggt	atcggtggca	gtgtcgatcat	catcatcggt	240
gtccttatca	gtgtcaggat	cgctgtcctt	ctttggtccc	atccatacat	tcatgacggc	300
caggacgagg	ataccaattg	a				321

<210> 77  
 <211> 106  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 77

Met	His	Lys	Phe	Ser	Asn	Lys	Phe	Tyr	Phe	Ile	Ile	Lys	Gly	Val	Leu
1				5					10					15	
Ile	Ile	Ile	Phe	Val	Pro	Asp	Val	Val	Phe	Ser	Ile	Phe	Leu	Leu	Pro
			20					25					30		
Pro	Leu	Gly	Val	Arg	His	Lys	Asn	Gly	Gly	Gly	Gly	Asn	Glu	Glu	Gln
		35					40					45			
Lys	Ser	Gly	Pro	Ser	Gln	Lys	His	His	Ile	Pro	Gly	Pro	Val	Leu	Ile
	50					55				60					
Phe	Val	Leu	Ile	Ile	Val	Ile	Val	Gly	Ser	Val	Val	Ile	Ile	Ile	Gly
65					70				75					80	
Val	Leu	Ile	Ser	Val	Arg	Ile	Ala	Val	Leu	Leu	Trp	Ser	His	Pro	Tyr
				85					90					95	
Ile	His	Asp	Gly	Gln	Asp	Glu	Asp	Thr	Asn						
			100						105						

<210> 78  
 <211> 1635  
 <212> DNA  
 <213> SHRIMP

<400> 78  
 atgttcgctc aattctgttc actatatctt cttcaacgcc gggttaacga caatcttaga 60  
 tccacggcgt ccgcttcggc agcggcctca ttaaaaggag atggaactga atttataacc 120  
 ggagaaccac cttctcataa aatgagggga cttctttata gcgttttagg acctgatccg 180  
 tgcgaggacc cagaaagggg atatatgtgat attgtagtgt ctattttgca gacaaataat 240  
 atacaggtaa caaaagaatg ggaattgttt tccgataagt tgagaaaatt ggggtccatgg 300  
 attgatagga gcggaattga gaataatggc gaaggagaag aagatggaga tgaaaatgaa 360  
 gacgggggtg gaaatggggg aagaattgaa gacagagaag cacatcgacg aaaaatgatg 420  
 aagaaattgt cttttgttgg aagagaagat ccagtcgctg tagatttacc cacgtggcga 480  
 gaaaacagta cagaatttgc acgtcgttta acactcaagg aattgtgcga tttaatagtt 540  
 gaatgtggat gcacaaaatc aaaagaggaa ctctttgact tcatttttga agaaccgtgg 600  
 gagattaaag aggctgctga cgtaggggt atggcaaaca ggagtaaatt caccaaggaa 660  
 tcattaattg actggttttt tgagttcgac acatatagta aatgtgtagt attttttgaa 720  
 gcagtcaact ggtacttgaa atctcaagcg tctccaattt cattgttact agatgatata 780  
 tattgttgtg tcttttccta cataagacgc caaacctttt taactagggc aaaaaaccca 840  
 tctttaacag tggcttcac cttttctccc acgcccga caaagctttt ggctatcgac 900  
 gagtgcgtgc aacacttttt aaaatcagac attaatatta gccagatggc attaactgaa 960  
 agggactgct tcttcctct ttttaactgaa atgccccgcc aacaaaaaaaa agtaaacacc 1020  
 ttccctggaca caatgaagag acctacctta tctcttctac cttccacctc ctccctcctc 1080  
 tcttccaaca acaagagaaa gagaaatact gccgctgcc aatattcttct tccagtgtac 1140  
 aggagtaact tttctacagc atccaataac aagagactga aaactgatga tggggaaaat 1200  
 gcatcagcct gtattcttat cgaaggggat gcgaatggaa aaataagccc tataaggatt 1260  
 atggtaagaa aatcaactat tattccagaa gtgtttaacc atcttttgtt ccctgtcttt 1320  
 gcctctaaag acactggtgc gaatatctta ttttttatca aaatgaaatc ctttgcaagt 1380  
 gcactctttac tctccctgg actttttaga caccctaaac aatttctcaa cgggccgtgc 1440  
 aaatggatga ctctagcaga aaacaacatc aacgacaaca acataaactc ttccacgatg 1500  
 tggagttaca cgctagcaga ttattgtcct ctgggctatt acaccaaga gagccctcaa 1560  
 ccctatcaga catgcgcaaa ttttacttcg actacaaaca agagactaca aaacgtgcag 1620  
 ccattatact ttttaa 1635

<210> 79  
 <211> 540  
 <212> PRT  
 <213> SHRIMP

<400> 79  
 Met Phe Arg Gln Phe Cys Ser Leu Tyr Leu Leu Gln Arg Arg Val Asn  
 1 5 10 15  
 Asp Asn Leu Arg Ser Thr Ala Ser Ala Ser Ala Ala Ser Leu Lys  
 20 25 30  
 Gly Asp Gly Thr Glu Phe Ile Thr Gly Glu Pro Pro Ser His Lys Met  
 35 40 45  
 Arg Gly Pro Ser Tyr Ser Val Leu Gly Pro Asp Pro Cys Glu Asp Pro  
 50 55 60  
 Glu Arg Val Tyr Val Asp Ile Val Val Ser Ile Leu Gln Thr Asn Asn  
 65 70 75 80  
 Ile Gln Val Thr Lys Glu Trp Glu Leu Phe Ser Asp Lys Leu Arg Lys  
 85 90 95  
 Leu Gly Pro Trp Ile Asp Arg Ser Gly Ile Glu Asn Asn Gly Glu Gly  
 100 105 110  
 Glu Glu Asp Gly Asp Glu Asn Glu Asp Gly Gly Gly Asn Gly Gly Arg  
 115 120 125  
 Ile Glu Asp Arg Glu Ala His Arg Arg Lys Met Met Lys Lys Leu Ser  
 130 135 140

Phe Val Gly Arg Glu Asp Pro Val Ala Val Asp Leu Pro Thr Trp Arg  
 145 150 155 160  
 Glu Asn Ser Thr Glu Phe Ala Arg Arg Leu Thr Leu Lys Glu Leu Cys  
 165 170 175  
 Asp Leu Ile Val Glu Cys Gly Cys Ile Lys Ser Lys Glu Glu Leu Phe  
 180 185 190  
 Asp Phe Ile Phe Glu Glu Pro Trp Glu Ile Lys Glu Ala Ala Asp Val  
 195 200 205  
 Arg Gly Met Ala Asn Arg Ser Lys Phe Thr Lys Glu Ser Leu Ile Asp  
 210 215 220  
 Trp Phe Phe Glu Phe Asp Thr Tyr Ser Lys Cys Val Val Phe Phe Glu  
 225 230 235 240  
 Ala Val Asn Trp Tyr Leu Lys Ser Gln Asp Ile Ser Leu Val Leu Asp  
 245 250 255  
 Asp Ile Tyr Cys Cys Val Phe Ser Tyr Ile Arg Arg Gln Thr Phe Leu  
 260 265 270  
 Thr Arg Ala Lys Asn Pro Ser Leu Thr Val Ala Ser Ser Phe Ser Pro  
 275 280 285  
 Thr Pro Asp Thr Lys Leu Leu Ala Ile Asp Glu Cys Val Gln His Phe  
 290 295 300  
 Leu Lys Ser Asp Ile Asn Ile Ser Gln Met Ala Leu Thr Glu Arg Asp  
 305 310 315 320  
 Cys Phe Phe Pro Leu Leu Thr Glu Met Pro Arg Gln Gln Lys Lys Val  
 325 330 335  
 Asn Thr Phe Leu Asp Thr Met Lys Arg Pro Thr Leu Ser Leu Leu Pro  
 340 345 350  
 Ser Thr Ser Ser Ser Ser Ser Ser Asn Asn Lys Arg Lys Arg Asn Thr  
 355 360 365  
 Ala Ala Ala Asn Ile Leu Leu Pro Val Tyr Arg Ser Asn Phe Ser Thr  
 370 375 380  
 Asn Asn Lys Arg Leu Lys Thr Asp Asp Gly Glu Asn Ala Ser Ala Cys  
 385 390 395 400  
 Ile Leu Ile Glu Gly Tyr Ala Asn Gly Lys Ile Ser Pro Ile Arg Ile  
 405 410 415  
 Met Val Arg Lys Ser Thr Ile Ile Pro Glu Val Phe Asn His Leu Leu  
 420 425 430  
 Phe Pro Val Phe Ala Ser Lys Asp Thr Gly Ala Asn Ile Leu Phe Phe  
 435 440 445  
 Ile Lys Met Lys Ser Phe Ala Ser Ala Ser Leu Leu Leu Pro Gly Leu  
 450 455 460  
 Phe Arg His Pro Lys Gln Phe Leu Asn Gly Pro Cys Lys Trp Met Thr  
 465 470 475 480  
 Leu Ala Glu Asn Asn Ile Asn Asp Asn Asn Ile Asn Ser Ser Thr Met  
 485 490 495  
 Trp Ser Tyr Thr Leu Ala Asp Tyr Cys Pro Leu Gly Tyr Tyr Thr Gln  
 500 505 510  
 Glu Ser Pro Gln Pro Tyr Gln Thr Cys Gly Asn Phe Thr Ser Thr Thr  
 515 520 525  
 Asn Lys Arg Leu Gln Asn Val Gln Pro Leu Tyr Phe  
 530 535 540

<210> 80  
 <211> 582  
 <212> DNA  
 <213> SHRIMP

<400> 80  
 atggatgact cttagcagaaa acaacatcaa cgacaacaac ataaactcctt ccacgatgtg 60  
 gagttacacg cttagcagatt attgtcctct gggctattac acccaagaga gccctcaacc 120  
 ctatcagaca tgcggcaatt ttacttcgac taaaacaag agactacaaa acgtgcagcc 180

WO 01/38351

PCT/US00/28888

168

```

attatacttt taaacactct tttggaatac tacaggacac cttcagaaga gtgggaaatt 240
ccgtttaatc tcttgcttaa tgtgatgaat aacaagtgga gtacactcat tccagggtgc 300
aaaataagtg caggatcat atcgaaactc ccatggacca tgaaaacaat gtacgagatt 360
gtttcttcgc ccaataataa taataacaac ggagactact attctacatg caggcgaatg 420
gtaatggaat atcctatcgg ggggtttattg cacacgcctg ccataactaa taagtatcca 480
cgctccagaa tggtcacctg tacaaagggc aaagaccacc agaagctata tgacatctct 540
agacaaatgt ttgatataat agaagcaaat ggacaactct ga 582

```

<210> 81  
 <211> 193  
 <212> PRT  
 <213> SHRIMP

<400> 81  
 Met Asp Asp Ser Ser Arg Lys Gln His Gln Arg Gln Gln His Lys Leu  
 1 5 10 15  
 Phe His Asp Val Glu Leu His Ala Ser Arg Leu Leu Ser Ser Gly Leu  
 20 25 30  
 Leu His Pro Arg Glu Pro Ser Thr Leu Ser Asp Met Arg Gln Phe Tyr  
 35 40 45  
 Phe Asp Tyr Lys Gln Glu Thr Thr Lys Arg Ala Ala Ile Ile Leu Leu  
 50 55 60  
 Asn Thr Leu Leu Glu Tyr Tyr Arg Thr Pro Ser Glu Glu Trp Glu Ile  
 65 70 75 80  
 Pro Phe Asn Leu Leu Asn Val Met Asn Asn Lys Trp Ser Thr Leu  
 85 90 95  
 Ile Pro Gly Val Lys Ile Ser Ala Gly Ile Ile Ser Lys Leu Pro Trp  
 100 105 110  
 Thr Met Lys Thr Met Tyr Glu Ile Val Ser Ser Pro Asn Asn Asn Asn  
 115 120 125  
 Asn Asn Gly Asp Tyr Tyr Ser Thr Cys Arg Arg Met Val Met Glu Tyr  
 130 135 140  
 Pro Ile Gly Gly Leu Leu His Thr Pro Ala Ile Thr Asn Lys Tyr Pro  
 145 150 155 160  
 Arg Ser Arg Met Val Thr Cys Thr Lys Gly Lys Asp His Gln Lys Leu  
 165 170 175  
 Tyr Asp Ile Ser Arg Gln Met Phe Asp Ile Ile Glu Ala Asn Gly Gln  
 180 185 190  
 Leu

<210> 82  
 <211> 615  
 <212> DNA  
 <213> SHRIMP

<400> 82  
 atggatcttt ctttactct ttcgggtcgtg tcggccatcc tcgccatcac tgctgtgatt 60  
 gctgtattta ttgtgatttt taggtatcac aacactgtga ccaagaccat cgaaaccac 120  
 acagacaata tcgagacaaa catggatgaa aacctccgca ttctgtgac tgctgagggt 180  
 ggatcaggct acttcaagat gactgatgtg tcttttgaca gcgacacctt gggcaaaatc 240  
 aagatccgca atggaaagtc tgatgcacag atgaaggaa aagatgcgga tcttgtcatc 300  
 actcccgtgg agggccgagc actcgaagtg actgtggggc agaatctcac ctttgaggga 360  
 acattcaagg tgtggaacaa cacatcaaga aagatcaaca tcaactggtat gcagatggtg 420  
 ccaaagatta acccatcaaa ggcttttgc ggtagctcca acacctctc cttcaccccc 480  
 gtctctattg atgaggatga agttggcacc tttgtgtgtg gtaccacctt tggcgacca 540  
 attgcagcta ccgccgtgg aaatcttttc gacatgtacg tgcacgtcac ctactctggc 600  
 actgagaccg agtaa 615

<210> 83

WO 01/38351

PCT/US00/28888

169

<211> 204  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 83

Met	Asp	Leu	Ser	Phe	Thr	Leu	Ser	Val	Val	Ser	Ala	Ile	Leu	Ala	Ile
1				5					10					15	
Thr	Ala	Val	Ile	Ala	Val	Phe	Ile	Val	Ile	Phe	Arg	Tyr	His	Asn	Thr
		20						25					30		
Val	Thr	Lys	Thr	Ile	Glu	Thr	His	Thr	Asp	Asn	Ile	Glu	Thr	Asn	Met
		35					40					45			
Asp	Glu	Asn	Leu	Arg	Ile	Pro	Val	Thr	Ala	Glu	Val	Gly	Ser	Gly	Tyr
	50					55					60				
Phe	Lys	Met	Thr	Asp	Val	Ser	Phe	Asp	Ser	Asp	Thr	Leu	Gly	Lys	Ile
65					70					75					80
Lys	Ile	Arg	Asn	Gly	Lys	Ser	Asp	Ala	Gln	Met	Lys	Glu	Glu	Asp	Ala
			85						90					95	
Asp	Leu	Val	Ile	Thr	Pro	Val	Glu	Gly	Arg	Ala	Leu	Glu	Val	Thr	Val
		100						105					110		
Gly	Gln	Asn	Leu	Thr	Phe	Glu	Gly	Thr	Phe	Lys	Val	Trp	Asn	Asn	Thr
	115						120					125			
Ser	Arg	Lys	Ile	Asn	Ile	Thr	Gly	Met	Gln	Met	Val	Pro	Lys	Ile	Asn
	130					135					140				
Pro	Ser	Lys	Ala	Phe	Val	Gly	Ser	Ser	Asn	Thr	Ser	Ser	Phe	Thr	Pro
145					150					155					160
Val	Ser	Ile	Asp	Glu	Asp	Glu	Val	Gly	Thr	Phe	Val	Cys	Gly	Thr	Thr
			165						170					175	
Phe	Gly	Ala	Pro	Ile	Ala	Ala	Thr	Ala	Gly	Gly	Asn	Leu	Phe	Asp	Met
		180						185					190		
Tyr	Val	His	Val	Thr	Tyr	Ser	Gly	Thr	Glu	Thr	Glu				
		195					200								

<210> 84  
 <211> 888  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 84

atgaagaatt	cgcggcagag	gtcagggcgtg	tggaggggta	actcgtgttt	gtacaaatca	60
ttttattttt	ctggtgccat	aattgaatgt	aaaaaaataa	ggataataat	gatgttcctt	120
ttattatctc	tcatactttt	tgtgtgtttt	gtgggtgtgg	tggtttgtgt	gattttcatg	180
tcacgaccaa	ataaaactac	tacaacatcc	aataaaaaaa	caaagaaaga	taaagagaag	240
gaaaaagaag	atgacaccga	aggagctgta	ttagggcgaa	gggaacctga	aaataggccg	300
atcggaagag	acgaggaagg	tgctgtagaa	gacggaaaag	aagaggagga	agtttttgaa	360
tttgaacaac	cgagtgtaaa	tactgggtcc	aatacaggag	gtggaggaac	aggaactgtg	420
cctggagaag	gtttgttacc	tccaccccct	cctactccta	ctcctactcc	tccacctact	480
cctactccta	ctcctccacc	tcccccgaca	cgaaccccat	ctccttcttc	atctcttggg	540
gaagatgatg	atgatgat	agacatagac	tttgatgata	atgatataga	cgaattttta	600
gatagtggag	aagaaatgga	agaagacgaa	gaagagggaag	atttggacac	actcctttca	660
agactagaaa	caggcatgag	cggcgaagaa	gtagattttg	atgcatcatc	tgcatatatt	720
caaccagatc	ctgtagttgt	caaaaacata	gaaaggtcag	attatactct	ggacccaatg	780
gagtcgtgga	aagttttgaa	cagatctgag	ggagatatta	gattcttcgt	agatcgaggg	840
ataaccaaca	agattaaagc	catgacggaa	gatctgaagg	aactgtaa		888

<210> 85  
 <211> 295  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 85

Met	Lys	Asn	Ser	Arg	Gln	Arg	Ser	Gly	Val	Trp	Arg	Gly	Asn	Ser	Cys
1				5					10				15		
Leu	Tyr	Lys	Ser	Phe	Tyr	Phe	Ser	Gly	Ala	Ile	Ile	Glu	Cys	Lys	Lys
			20					25				30			
Ile	Arg	Ile	Ile	Met	Met	Phe	Leu	Leu	Leu	Ser	Leu	Ile	Leu	Phe	Val
		35					40					45			
Cys	Phe	Val	Gly	Val	Val	Val	Gly	Val	Ile	Phe	Met	Ser	Arg	Pro	Asn
	50					55				60					
Lys	Thr	Thr	Thr	Thr	Ser	Asn	Lys	Lys	Thr	Lys	Lys	Asp	Lys	Glu	Lys
65					70					75				80	
Glu	Lys	Glu	Asp	Asp	Thr	Glu	Gly	Ala	Val	Leu	Gly	Arg	Arg	Glu	Pro
				85				90						95	
Glu	Asn	Arg	Pro	Ile	Gly	Arg	Asp	Glu	Glu	Gly	Ala	Val	Glu	Asp	Gly
			100					105					110		
Lys	Glu	Glu	Glu	Glu	Val	Phe	Glu	Phe	Glu	Gln	Pro	Ser	Val	Asn	Thr
	115						120					125			
Gly	Ser	Asn	Thr	Gly	Gly	Gly	Gly	Thr	Gly	Thr	Val	Pro	Gly	Glu	Gly
	130				135						140				
Leu	Leu	Pro	Pro	Pro	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Pro	Pro	Pro	Thr
145					150					155					160
Pro	Thr	Pro	Thr	Pro	Pro	Pro	Pro	Pro	Thr	Arg	Thr	Pro	Ser	Pro	Ser
				165					170					175	
Ser	Ser	Leu	Gly	Glu	Asp	Asp	Asp	Asp	Asp	Ile	Asp	Ile	Asp	Phe	Asp
			180					185					190		
Asp	Asn	Asp	Ile	Asp	Glu	Phe	Leu	Asp	Ser	Gly	Glu	Glu	Met	Glu	Glu
		195					200					205			
Asp	Glu	Glu	Glu	Glu	Asp	Leu	Asp	Thr	Leu	Leu	Ser	Arg	Leu	Glu	Thr
	210				215						220				
Gly	Met	Ser	Gly	Glu	Glu	Val	Asp	Phe	Asp	Ala	Ser	Ser	Ala	Tyr	Ile
225					230					235					240
Gln	Pro	Asp	Pro	Val	Val	Val	Lys	Asn	Ile	Glu	Arg	Ser	Asp	Tyr	Thr
			245						250					255	
Leu	Asp	Pro	Met	Glu	Ser	Trp	Lys	Val	Leu	Asn	Arg	Ser	Glu	Gly	Asp
			260					265						270	
Ile	Arg	Phe	Phe	Val	Asp	Arg	Gly	Ile	Thr	Asn	Lys	Ile	Lys	Ala	Met
	275						280						285		
Thr	Glu	Asp	Leu	Lys	Glu	Leu									
	290					295									

&lt;210&gt; 86

&lt;211&gt; 603

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 86

```

atgaccatgt ggaacaaaat tgtaataact actaaacgaa tgaattggcc tatgggtgtt 60
ggtgttttct ttattctagc aataactgcc ttagctgtcg ctctctatat acgacatgct 120
tctaaacaag aaaaatactc cacttctcat atcaatgaac aatttactgc caaacagtgt 180
ccagtcactt acttgtcaaa aacgggtaaa ttaaaggaca tgcacttgac ccattccgat 240
tttatggcat atgttgatgt gcacaataga acaaaaactc tgaagcaccc catgtgtact 300
gacgaggctg gctgggcccc cttttgcctg ctggcttctg ctgaagctta tcgtcgcatc 360
cgttatggga gaggagaatt tggaccagaa aaacattccc tagctgaaac tatccaatcg 420
acagtacaag atatgtcgga gccatatata acccacatct tcaagaagaa cacggatgtt 480
gatggacacg gaatgcaatc tgttttgag aagaatagga ataaaatcag aatgggtgat 540
ggaaaaacgt catcagaaac ttataatctt agtgataagt ctatatctat tgttggtgta 600
tag

```

&lt;210&gt; 87

&lt;211&gt; 196

&lt;212&gt; PRT

WO 01/38351

PCT/US00/28888

171

&lt;213&gt; SHRIMP

&lt;400&gt; 87

```

Met Thr Met Trp Asn Lys Ile Val Ile Thr Thr Lys Arg Met Asn Trp
 1          5          10          15
Pro Met Val Val Gly Val Phe Phe Ile Leu Ala Ile Thr Ala Val Tyr
          20          25          30
Ile Arg His Ala Ser Lys Gln Glu Lys Tyr Ser Thr Ser His Ile Asn
          35          40          45
Glu Gln Phe Thr Ala Lys Gln Leu Pro Val Thr Tyr Leu Ser Lys Thr
          50          55          60
Gly Lys Leu Lys Asp Met His Leu Thr His Ser Asp Phe Met Ala Tyr
65          70          75          80
Val Asp Val His Asn Arg Thr Lys Thr Leu Lys His Pro Met Cys Thr
          85          90          95
Asp Glu Ala Gly Trp Ala His Phe Cys Leu Leu Ala Ser Ala Glu Ala
          100          105          110
Tyr Arg Arg Ile Arg Tyr Gly Arg Gly Glu Phe Gly Pro Glu Lys His
          115          120          125
Ser Leu Ala Glu Thr Ile Gln Ser Thr Val Gln Asp Met Ser Glu Pro
          130          135          140
Tyr Ile Thr His Ile Phe Lys Lys Asn Thr Asp Val Asp Gly His Gly
145          150          155          160
Met Gln Ser Val Leu Glu Lys Asn Arg Asn Lys Ile Arg Met Gly Asp
          165          170          175
Gly Lys Thr Ser Ser Glu Thr Tyr Asn Leu Ser Asp Lys Ser Ile Ser
          180          185          190
Ile Val Gly Val
          195

```

&lt;210&gt; 88

&lt;211&gt; 861

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 88

```

atgagctcgg gtagtatcaa caaccatccc tcctcaaaca tggacaccaa caaaatggag 60
gaaggggaag aacaggattt tgatgtatta gaactggact actccaaaat catccatgat 120
attactgcca tggtatctgt tgcagctcct cctcccaatt ccatactgga cgcactctgat 180
ggactaatag caactgcgtc tgcgacagca ccagcagccg aaacaggaaa ctctaacagg 240
atgaggctag ataaagacgt gtgccaacta atcgaaaggg acatagaatt agtgaagagt 300
gatactattg aagttgactc cattattcgc caactgttat attttgaga atctgcatca 360
gagaaaaaca taaaaaccaa ctctactgaa aaggagccag tttacttccc caaagaaccg 420
aaaggggagg cagtcaaact ggctaagaat accccagttc tagatacgat aacaaaacta 480
gattggatgg cgaacatctg ccaaagcaac aagatcgggg ttgaaaattt agcctctgcg 540
ttacaaagtg ggcaattaat atggacaact ttcccagctg ctgtatatgc ttcgttggaac 600
agctttttatc acattgctat aatgtggaaa ctttttaggtt cctttataaa catcgaagct 660
ttatcaaaag gatcaaagga caatcttttg cctcgtgatg atatacaggt tgtccatgct 720
aaacaggaga ttgctgcaat gcttcaatct agacaaaata ttctcggaag aggaccgctg 780
gaatatccgc ctgtgcctat cactgcaatt ctatcacgta ctataattcc cctgttgagg 840
aacttttctg agaaattatg a
          861

```

&lt;210&gt; 89

&lt;211&gt; 286

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 89

```

Met Ser Ser Gly Ser Ile Asn Asn His Pro Ser Ser Asn Met Asp Thr
 1          5          10          15

```

Asn Lys Met Glu Glu Gly Glu Glu Gln Asp Phe Asp Val Leu Glu Leu  
 20 25 30  
 Asp Tyr Ser Lys Ile Ile His Asp Ile Thr Ala Met Leu Ser Val Ala  
 35 40 45  
 Ala Pro Pro Pro Asn Ser Ile Leu Asp Ala Ser Asp Gly Leu Ile Ala  
 50 55 60  
 Thr Ala Ser Ala Thr Ala Pro Ala Ala Glu Thr Gly Asn Ser Asn Arg  
 65 70 75 80  
 Met Arg Leu Asp Lys Asp Val Cys Gln Leu Ile Glu Arg Asp Ile Glu  
 85 90 95  
 Leu Val Lys Ser Asp Thr Ile Glu Val Asp Ser Ile Ile Arg Gln Leu  
 100 105 110  
 Leu Tyr Phe Gly Glu Ser Ala Ser Glu Lys Asn Ile Lys Thr Asn Ser  
 115 120 125  
 Thr Glu Lys Glu Pro Val Tyr Phe Pro Lys Glu Pro Lys Gly Glu Ala  
 130 135 140  
 Val Lys Leu Ala Lys Asn Thr Pro Val Leu Asp Thr Ile Thr Lys Leu  
 145 150 155 160  
 Asp Trp Met Ala Asn Ile Cys Gln Ser Asn Lys Ile Gly Val Glu Asn  
 165 170 175  
 Leu Ala Ser Ala Leu Gln Ser Gly Gln Leu Ile Trp Thr Thr Phe Pro  
 180 185 190  
 Ala Ala Val Tyr Ala Ser Leu Asp Ser Phe Tyr His Ile Ala Ile Met  
 195 200 205  
 Trp Lys Leu Leu Gly Ser Phe Ile Asn Ile Glu Ala Leu Ser Lys Gly  
 210 215 220  
 Ser Lys Asp Asn Leu Leu Pro Arg Asp Asp Ile Gln Val Val His Ala  
 225 230 235 240  
 Lys Gln Glu Ile Ala Ala Met Leu Gln Ser Arg Gln Asn Ile Leu Gly  
 245 250 255  
 Arg Gly Pro Ser Glu Tyr Pro Pro Val Pro Ile Thr Ala Ile Leu Ser  
 260 265 270  
 Arg Thr Ile Ile Pro Leu Leu Arg Asn Phe Ser Glu Lys Leu  
 275 280 285

<210> 90  
 <211> 696  
 <212> DNA  
 <213> SHRIMP

<400> 90  
 atggaccctg gagcatcggc tgcttcacagg agggctttat ggtctagcac tgtaacaaac 60  
 acaaggcatt atcagcagca attgaaccgt gcactgaata agattgaaga agaagatgat 120  
 gtcgaggagg aacatgggca ggtaacaaca acaaacaaag aaatggcttc tactttctaca 180  
 tcttcttcct catcctcctc ttctttctccc acgtcttcgg ccatcccttc aagcgatgag 240  
 gaagaagaag aagaagaaga atatgactct gaatcagaca ctaacgtcga ttctcttctt 300  
 ggagaggagg aggaagaaga ttcagataca gaatccacat ctgctgatgc aaactttcta 360  
 cgatcttctt cacggaattc caccgaccaga aacaggctaa taaaaaagta cgttgataga 420  
 tttatcaagt acgaaaagga tatttttactt gctgacagga ataaaaggaa gaagaggcac 480  
 cgtaatcggc aacccccaaat acataagcta aacaacaaaa gactcaaaaa accaacagac 540  
 aagaaacaga aaaccaataa gaagaaaact tggagaagac tccctaaatt tattaataaag 600  
 atgtctcctg caagtagact gaaatttttc tctgcttgta taatatcagg gataaaaata 660  
 acttctataa tagtactgtc gataatggcc ctttag 696

<210> 91  
 <211> 231  
 <212> PRT  
 <213> SHRIMP

<400> 91



Met Asp Pro Gly Ala Ser Ala Ala Ser Arg Arg Ala Leu Trp Ser Ser  
 1 5 10 15  
 Thr Val Thr Asn Thr Arg His Tyr Gln Gln Gln Leu Asn Arg Ala Leu  
 20 25 30  
 Asn Lys Ile Glu Glu Glu Asp Asp Val Glu Glu Glu His Gly Gln Val  
 35 40 45  
 Thr Thr Thr Asn Lys Glu Met Ala Ser Thr Ser Thr Ser Ser Ser  
 50 55 60  
 Ser Ser Ser Ser Ser Pro Thr Ser Ser Ala Ile Pro Ser Ser Asp Glu  
 65 70 75 80  
 Glu Glu Glu Glu Glu Glu Glu Tyr Asp Ser Glu Ser Asp Thr Asn Val  
 85 90 95  
 Asp Ser Leu Leu Gly Glu Glu Glu Glu Asp Ser Asp Thr Glu Ser  
 100 105 110  
 Thr Ser Ala Asp Ala Asn Phe Leu Arg Ser Ser Ser Arg Asn Ser Thr  
 115 120 125  
 Thr Arg Asn Arg Leu Ile Lys Lys Tyr Val Asp Arg Phe Ile Lys Tyr  
 130 135 140  
 Glu Lys Asp Ile Leu Leu Ala Asp Arg Asn Lys Arg Lys Lys Arg His  
 145 150 155 160  
 Arg Asn Arg Gln Pro Gln Ile His Lys Leu Asn Asn Lys Arg Leu Lys  
 165 170 175  
 Lys Pro Thr Asp Lys Lys Gln Lys Thr Asn Lys Lys Lys Thr Trp Arg  
 180 185 190  
 Arg Leu Pro Lys Phe Ile Lys Lys Met Ser Pro Ala Ser Arg Leu Lys  
 195 200 205  
 Phe Phe Ser Ala Cys Ile Ile Ser Gly Ile Lys Ile Thr Ser Ile Ile  
 210 215 220  
 Val Leu Ser Ile Met Ala Leu  
 225 230

<210> 92  
 <211> 4608  
 <212> DNA  
 <213> SHRIMP

<400> 92  
 atggctcaca aactttttatt tctggaggaa gaagatgcta aagagattgg caccctctcc 60  
 caccacagaac cttcattcgc tctttatgag agtgaaacat tccggtcggg gggcttctgc 120  
 aaaaatgtaa ccgatgccta ccccaaattt cttcctcggc cgatggacat taattctgtg 180  
 caggcactag cagtgcgtct agccctgatt caattctaca aaggagagg gtggaagaag 240  
 aacatgtcca ttatagacct tgtgaaagat aagggtcgaaa ggaattttaa agtgacaag 300  
 aaaacgagtg gaggatttat catcggagat ggtactggtg taggaaaaac aagagaattg 360  
 gcagccttcg tcatgagtgt catactacaa gaaaaggcac tcttagatgt acaaaaacac 420  
 gtagggccat caatttttgg tcaagattcg gacaaggtaa ttacggccat caacagtggc 480  
 gtgtggaaaa ggcaccctt ttttatatgg ttgacgtgct ctaagcctct tttcaacagc 540  
 tgtcaacagg gcatgcgaga agtggttaca aattctagag gtcttcgtga tcctaaattt 600  
 tcatggagaa aactacaagt gccttgtgct aataaaccac cgtctttcaa gagcgacggg 660  
 aaaagtgggt ccatgacagt agatgtggaa aattctgtat cgtctgctaa agactcgggtg 720  
 gatattagat ttttactct cagggtatgtt aaggaatttc atagtaagcg ttcttcaaga 780  
 tcaataggag atttcttaac agaaacgccc accattttat ttatgacgta ctctgattta 840  
 cgcacaaatc tggattttgt actgaaattt ataacaggag gaacagacct cgattccaac 900  
 aaggttatgc ccattgacaa ctttgtcaca gcattattat gtgacgagtt ccacaagact 960  
 caaaatatta gtgactcttt tagaaaggaa ctggcaaaga cttggggagga agaagatact 1020  
 agagttttgc gcaacatata aaaaagggca aacccttcag tgtcagacct tattaataag 1080  
 ttcaagagtg caatgagtga cgacagaaac tttaaagtga agcgcatgaa atcatccaat 1140  
 aataagggcc gagttacaat gtccaactac ttgaaactat tatctcaagc tgatgcgttc 1200  
 cgtattttct tagagatctt aaagtatgat acgttcacgg ttatggccag cgctacgcca 1260  
 ttccagagca atgctgattt gcacatgatt gaccacatac taaggaaaag tgcgccagcc 1320  
 tacacgagca tacaagcctt caaagaagtg tccagtgcata ctccagatgc tatggctgag 1380

cacagcgagt	acgtgacagt	gtttctggaa	caggttatta	aacttttaag	aaatagagga	1440
caattgggta	gtaggagtat	tagcatggct	ggagtcgact	gctctactac	taattgtaaa	1500
gcctcccctc	ttcaaaaata	cgctatagac	gaattggctt	cgtactgttt	aaacgctaga	1560
caagtactca	tcgattctga	aaaagtagga	ggacatgtca	gaagggcctt	cacaaagatt	1620
atacgagaac	accaagaagg	aggaatattg	gaagaggaag	atggtgaaaa	attagtagca	1680
gagattaatt	ccccgtccag	aaagaggaaa	cgtgctgcaa	atgatgatga	tttatatgaa	1740
gtaattgaaa	atatcgacag	gcgttttaag	gtggtggttg	tgcgcgatag	ggatgtcgca	1800
catgatggga	aaacaacact	aagaagtata	gtacaagatg	ctataaaaaac	ctactcacag	1860
aaaaaggatg	cgctttctaa	tggaggagga	ggaataataa	cgtctccgga	agttgacata	1920
agcagcattg	atatggttgc	tcaagattta	tacgatgcta	tcaagaaaaa	ggaaaaacct	1980
tccaaaggta	aaactgattt	taacgaagat	tatgacgacg	gtgctaataa	agaagacgga	2040
tggggtgaag	tatttgacga	cgagtgtttt	gaaaagttga	ggagacaata	cttcattaat	2100
acagcaagta	cttctgtggc	agcatgtaaa	ggtgcactat	tgaatatcaa	ggcaacttct	2160
gtcaccgatg	cagtgaagcg	tttaaggaca	acaaacgaat	caaaaaagat	ggtcacgtca	2220
ctagagcaaa	ctggggattc	ttttctcaag	aatttgacta	cacgcatctt	acaaacgacg	2280
gccaaaggatg	aaagtgacgc	aaaatacggc	atcgtagacg	tggggacatt	cgattcatcg	2340
cctgtttgcta	atacaatatt	ctcaggctat	agacttttgt	gccgtgcagt	catgatggct	2400
tcagctttca	caatctcctt	aaagaataaa	accaatagaa	gaacttcccc	agctcacggt	2460
atgctttgtc	cttcagtccc	tgacacggaa	cgctcatggt	cgctagcagg	caaccctata	2520
gattcaatca	cacaatcaat	aggggaggat	agtaacgctg	aaataacaaa	caggaaattg	2580
tgttcgcgta	taacgaatag	gggattgttt	ctggttaaaa	acaacactaa	aactgccaac	2640
acaaacaaat	gtattagtgc	attcaacaac	acgaaagaag	tcgacgttat	aatgctggga	2700
cctaaaggca	ataccggtct	ctctttacat	gactcttcta	ataactccat	gtacgctaaa	2760
cgttaccatt	gcgtttttaga	tgtaccttat	aacgccattg	ctttcctaca	gactatcggt	2820
aggactcaca	gaaacggtca	actttcagtc	cctcagttcc	tcataattctc	tacagactcg	2880
cccgcagaga	gaagattttt	tgatagtttg	gataagagga	tcaaagattc	aaaggcagga	2940
acatatgccg	atagatacag	taataattcc	atagatatgt	ctgccgcagt	tatgagggaa	3000
caattttatcg	atcaagggtt	agtcctaaag	actatgggga	atatcgtaca	gattgtcaca	3060
gccagtatga	caaagggtaca	cttgatggaa	catttttcaa	agatgatgat	gaggacaaat	3120
agaggagggg	ttgcattcgt	agaagggttg	acgttagaaa	atgggtatctt	cactgaagta	3180
attgtctctc	cgatgcacat	agcgctagta	gttatagggtg	cccaaaaata	aatcacatca	3240
tcagacgatc	ttgggcacat	tctttctttc	acgtctgtac	ttcctcataa	tcaaataattg	3300
tccattgtta	aatccgcac	tcaattcggt	ttttctaatt	tgtgtctgca	tttagtccac	3360
tttaaatctg	attgtgacaa	tcttctccca	cgcgagaagc	gagtgcgtga	tgcagcatct	3420
gccctgatag	acactttgaa	tacgaaaaat	aacgaagtta	cttccaagac	aaataaaaata	3480
gaaagtgatg	caccttcatt	aactgctcta	atgctccctt	ctggctcctag	gaatagaaaag	3540
atggatgttt	tctctaatat	aatggcatat	aataacaata	acggcatgga	ctttgatgaa	3600
gatgttcccg	acaatgatga	agacgaagg	tgtttacctt	tgcaagaaga	aaatgctaca	3660
acgttagctc	tatcaaaact	cccccatgat	tatgatagag	ccataaaaaga	tgcacatcaa	3720
ctagtgcagg	tgagaattgt	tgggtcaagga	gagaaagagg	gagtgattcc	tatcagtga	3780
tgttttagatg	tacctgaatt	agatatgaca	aatctcatac	ctgtagtgac	ggcaactaat	3840
gttatacaga	gtttggctaa	agaaaatcct	ggtttgcttt	ttactataca	taatgctgca	3900
ctagcacatt	cccacagaga	agggtacgga	ggttctcatc	ttctgggttt	ggctaagaaa	3960
ttgtcccgtg	gtttcattaa	ttttagacag	ttccaaaacc	aacttttctc	acctaaaaaa	4020
gagtctaaga	ttatgtacga	tatatctctg	agcgtcaaag	cgatcatggc	cagagatgat	4080
aggtatgatg	gcctttgtga	tatgagaatg	aacagcatga	tggatgcaag	tttcttaaaag	4140
gtcaggaaga	agccagagtg	tgttttcatt	acaaaattat	tggacaagaa	ttttaggaga	4200
catataataa	atgacgaaga	ggaagaaacg	agggagaggt	ttggcgggga	ggaagaagaa	4260
gaagacgacg	acgaagaatt	tgaagacgag	gaggaggaag	aagcagaaag	ggagtggggg	4320
gaagaagaag	gagaaagtgc	ttacgacatt	tctgtcatca	atgataaaaa	taacacaaac	4380
gggcacgatg	tggacataat	actgtgcaat	agaaagaaac	taacactcac	taaagaaaaat	4440
agtgtttttg	ttaatgaaca	catagactct	tttatgggtg	gaaatttaaat	aggtgctggaa	4500
ggttcttttga	tacaaatatg	ctttgataac	tgcacaggcg	agtttgaagg	tttaccctaaa	4560
ttttgcctgt	acgactcctc	atctaaagac	aaagacacca	ttccgtag		4608

<210> 93

<211> 1523

<212> PRT

<213> SHRIMP

<400> 93

Met	Ala	His	Lys	Leu	Leu	Phe	Leu	Glu	Glu	Glu	Asp	Ala	Lys	Glu	Ile
1				5					10					15	
Gly	Thr	Leu	Ser	His	Pro	Glu	Pro	Ser	Phe	Ala	Leu	Tyr	Glu	Ser	Glu
			20					25					30		
Thr	Phe	Arg	Ser	Val	Gly	Phe	Cys	Lys	Asn	Val	Thr	Asp	Ala	Tyr	Pro
		35					40					45			
Lys	Phe	Leu	Pro	Arg	Pro	Met	Asp	Ile	Asn	Ser	Val	Gln	Ala	Val	Arg
	50					55					60				
Leu	Ala	Leu	Ile	Gln	Phe	Tyr	Lys	Gly	Arg	Gly	Trp	Lys	Lys	Asn	Met
65					70					75				80	
Ser	Ile	Ile	Asp	Leu	Val	Lys	Asp	Lys	Val	Glu	Arg	Asn	Phe	Lys	Val
			85						90					95	
Asp	Lys	Lys	Thr	Ser	Gly	Gly	Phe	Ile	Ile	Gly	Asp	Gly	Thr	Gly	Val
			100					105					110		
Gly	Lys	Thr	Arg	Glu	Leu	Ala	Ala	Phe	Val	Met	Ser	Val	Ile	Leu	Gln
		115					120						125		
Glu	Lys	Ala	Leu	Leu	Asp	Val	Gln	Lys	His	Val	Gly	Pro	Ser	Ile	Phe
	130					135					140				
Gly	Gln	Asp	Ser	Asp	Lys	Val	Ile	Thr	Ala	Ile	Asn	Ser	Gly	Val	Trp
145					150					155				160	
Lys	Arg	His	Pro	Phe	Phe	Ile	Trp	Leu	Thr	Cys	Ser	Lys	Pro	Leu	Phe
				165					170					175	
Asn	Ser	Cys	Gln	Gln	Gly	Met	Arg	Glu	Val	Val	Thr	Asn	Ser	Arg	Gly
		180						185					190		
Leu	Arg	Asp	Pro	Lys	Phe	Ser	Trp	Arg	Lys	Leu	Gln	Val	Pro	Cys	Ala
		195					200					205			
Asn	Lys	Pro	Thr	Ser	Phe	Lys	Ser	Asp	Gly	Lys	Ser	Gly	Ser	Met	Thr
	210					215					220				
Val	Asp	Val	Glu	Asn	Ser	Val	Ser	Ser	Ala	Lys	Asp	Ser	Val	Asp	Ile
225					230					235				240	
Arg	Phe	Phe	Thr	Leu	Arg	Asp	Val	Lys	Glu	Phe	His	Ser	Lys	Arg	Ser
				245					250					255	
Ser	Arg	Ser	Ile	Gly	Asp	Phe	Leu	Thr	Glu	Thr	Pro	Thr	Ile	Leu	Phe
			260					265					270		
Met	Thr	Tyr	Ser	Asp	Leu	Arg	Thr	Asn	Leu	Glu	Phe	Val	Leu	Lys	Phe
		275					280					285			
Ile	Thr	Gly	Gly	Thr	Asp	Leu	Asp	Ser	Asn	Lys	Val	Met	Pro	Ile	Asp
	290					295					300				
Asn	Phe	Val	Thr	Ala	Leu	Leu	Cys	Asp	Glu	Phe	His	Lys	Thr	Gln	Asn
305					310					315				320	
Ile	Ser	Asp	Ser	Phe	Arg	Lys	Glu	Leu	Ala	Lys	Thr	Trp	Glu	Glu	Glu
				325					330					335	
Asp	Thr	Arg	Val	Leu	Arg	Asn	Ile	Gln	Lys	Arg	Ala	Asn	Pro	Ser	Val
			340					345					350		
Ser	Asp	Leu	Ile	Asn	Arg	Phe	Lys	Ser	Ala	Met	Ser	Asp	Asp	Arg	Asn
		355					360					365			
Phe	Lys	Val	Lys	Arg	Met	Lys	Ser	Ser	Asn	Asn	Lys	Gly	Arg	Val	Thr
	370					375					380				
Met	Ser	Asn	Tyr	Leu	Lys	Leu	Leu	Ser	Gln	Ala	Asp	Ala	Phe	Arg	Ile
385					390					395				400	
Phe	Leu	Glu	Ile	Leu	Lys	Tyr	Asp	Thr	Phe	Thr	Val	Met	Ala	Ser	Ala
				405						410				415	
Thr	Pro	Phe	Gln	Ser	Asn	Ala	Asp	Leu	His	Met	Ile	Asp	His	Ile	Leu
			420					425					430		
Arg	Lys	Ser	Ala	Pro	Ala	Tyr	Thr	Ser	Ile	Gln	Ala	Phe	Lys	Glu	Val
		435					440					445			
Ser	Ser	Ala	Thr	Pro	Asp	Ala	Met	Ala	Glu	His	Ser	Glu	Tyr	Val	Thr
		450				455					460				
Val	Phe	Leu	Glu	Gln	Val	Ile	Lys	Leu	Leu	Arg	Asn	Arg	Gly	Gln	Leu
465					470					475				480	
Val	Ser	Arg	Ser	Ile	Ser	Met	Ala	Gly	Val	Asp	Cys	Ser	Thr	Thr	Asn

				485					490					495	
Cys	Lys	Asp	Leu	Gln	Lys	Tyr	Ala	Ile	Asp	Glu	Leu	Ala	Ser	Tyr	Cys
			500					505					510		
Leu	Asn	Ala	Arg	Gln	Val	Leu	Ile	Asp	Ser	Glu	Lys	Val	Gly	Gly	His
		515					520					525			
Val	Arg	Arg	Ala	Phe	Thr	Lys	Ile	Ile	Arg	Glu	His	Gln	Glu	Gly	Gly
	530					535					540				
Ile	Glu	Glu	Asp	Val	Glu	Lys	Leu	Val	Ala	Glu	Ile	Asn	Ser	Pro	Ser
545					550					555					560
Arg	Lys	Arg	Lys	Arg	Ala	Ala	Asn	Asp	Asp	Asp	Leu	Tyr	Glu	Val	Met
				565					570					575	
Glu	Asn	Ile	Asp	Arg	Arg	Phe	Lys	Val	Val	Val	Val	Arg	Asp	Arg	Asp
			580					585					590		
Val	Ala	His	Asp	Gly	Lys	Thr	Thr	Leu	Arg	Ser	Ile	Val	Gln	Asp	Ala
		595					600					605			
Ile	Lys	Thr	Tyr	Ser	Gln	Lys	Lys	Asp	Ala	Leu	Ser	Asn	Gly	Gly	Gly
	610					615					620				
Gly	Ile	Ile	Thr	Ser	Pro	Glu	Val	Asp	Ile	Ser	Ser	Ile	Asp	Met	Val
625					630					635					640
Ala	Gln	Asp	Leu	Tyr	Asp	Ala	Ile	Lys	Lys	Lys	Glu	Lys	Pro	Ser	Lys
				645					650					655	
Gly	Lys	Thr	Asp	Phe	Asn	Glu	Asp	Tyr	Asp	Asp	Gly	Ala	Asn	Glu	Glu
			660					665					670		
Asp	Gly	Trp	Gly	Glu	Val	Phe	Asp	Asp	Glu	Cys	Phe	Glu	Lys	Leu	Arg
		675					680					685			
Arg	Gln	Tyr	Phe	Ile	Asn	Thr	Ala	Ser	Thr	Ser	Val	Ala	Ala	Cys	Lys
		690				695					700				
Gly	Ala	Leu	Leu	Asn	Ile	Lys	Ala	Thr	Ser	Val	Thr	Asp	Ala	Val	Lys
705				710						715				720	
Arg	Leu	Arg	Thr	Thr	Asn	Glu	Ser	Lys	Lys	Met	Val	Met	Ser	Leu	Glu
				725					730					735	
Gln	Thr	Gly	Asp	Ser	Phe	Leu	Lys	Asn	Leu	Thr	Thr	Arg	Ile	Leu	Gln
			740					745					750		
Thr	Ile	Ala	Lys	Asp	Glu	Ser	Asp	Ala	Lys	Tyr	Gly	Ile	Val	Asp	Val
		755					760					765			
Gly	Thr	Phe	Asp	Ser	Ser	Pro	Val	Ala	Asn	Thr	Ile	Phe	Ser	Gly	Tyr
	770					775					780				
Arg	Leu	Leu	Cys	Arg	Ala	Val	Met	Met	Ala	Ser	Ala	Phe	Thr	Ile	Ser
785				790						795					800
Leu	Lys	Asn	Lys	Thr	Asn	Arg	Arg	Thr	Ser	Pro	Ala	His	Val	Met	Leu
				805					810					815	
Val	Pro	Ser	Val	Pro	Asp	Thr	Glu	Pro	Leu	Met	Ala	Gly	Asn	Pro	Ile
			820					825					830		
Asp	Ser	Ile	Thr	Gln	Ser	Ile	Gly	Glu	Asp	Ser	Asn	Ala	Glu	Ile	Thr
		835													

Ser Asn Asn Ser Ile Asp Ile Ala Ala Ala Val Met Arg Glu Gln Phe  
 980 985 990  
 Ile Asp Gln Gly Leu Val Leu Lys Thr Met Gly Asn Ile Val Gln Ile  
 995 1000 1005  
 Val Thr Ala Ser Met Thr Lys Val His Leu Met Glu His Phe Ser Lys  
 1010 1015 1020  
 Met Met Met Arg Thr Asn Arg Gly Gly Val Ala Phe Val Glu Gly Leu  
 1025 1030 1035 1040  
 Thr Leu Glu Asn Gly Ile Phe Thr Glu Val Ile Val Leu Ala Met His  
 1045 1050 1055  
 Ile Ala Leu Val Val Ile Gly Ala Gln Asn Lys Ile Thr Ser Ser Asp  
 1060 1065 1070  
 Asp Leu Gly His Ala Leu Ser Phe Thr Ser Val Leu Pro His Asn Gln  
 1075 1080 1085  
 Ile Leu Ser Ile Val Lys Ser Ala Ser Gln Phe Val Phe Ser Asn Leu  
 1090 1095 1100  
 Cys Leu His Leu Val His Phe Lys Ser Asp Cys Asp Asn Leu Leu Pro  
 1105 1110 1115 1120  
 Arg Glu Lys Arg Val Arg Asp Ala Ala Ser Ala Leu Ile Asp Thr Leu  
 1125 1130 1135  
 Asn Thr Lys Asn Asn Glu Val Thr Ser Lys Thr Asn Lys Ile Glu Ser  
 1140 1145 1150  
 Asp Ala Pro Ser Leu Thr Ala Leu Met Leu Pro Ser Gly Pro Arg Asn  
 1155 1160 1165  
 Arg Lys Met Asp Val Phe Ser Asn Ile Met Ala Tyr Asn Asn Asn Asn  
 1170 1175 1180  
 Gly Met Asp Phe Asp Glu Asp Val Pro Asp Asn Asp Glu Asp Glu Gly  
 1185 1190 1195 1200  
 Cys Leu Pro Leu Gln Glu Glu Asn Ala Thr Thr Leu Ala Leu Ser Asn  
 1205 1210 1215  
 Phe Pro His Asp Tyr Asp Arg Ala Ile Lys Asp Ala His Gln Leu Val  
 1220 1225 1230  
 Thr Val Arg Ile Val Gly Gln Gly Glu Lys Glu Gly Val Ile Pro Ile  
 1235 1240 1245  
 Ser Glu Cys Leu Asp Val Pro Glu Leu Asp Met Thr Asn Leu Ile Pro  
 1250 1255 1260  
 Val Val Thr Ala Thr Asn Val Ile Gln Ser Leu Ala Lys Glu Asn Pro  
 1265 1270 1275 1280  
 Gly Leu Leu Phe Thr Ile His Asn Ala Ala His Ser His Arg Glu Gly  
 1285 1290 1295  
 Tyr Gly Gly Ser His Leu Leu Gly Leu Ala Lys Lys Leu Ser Arg Gly  
 1300 1305 1310  
 Phe Ile Asn Phe Arg Gln Phe Gln Asn Gln Leu Phe Ser Pro Lys Lys  
 1315 1320 1325  
 Glu Ser Lys Ile Met Tyr Asp Ile Phe Leu Ser Val Lys Ala Ile Met  
 1330 1335 1340  
 Ala Arg Asp Asp Arg Tyr Asp Gly Leu Cys Asp Met Arg Met Asn Ser  
 1345 1350 1355 1360  
 Met Met Asp Ala Ser Phe Leu Lys Val Arg Lys Lys Pro Glu Cys Val  
 1365 1370 1375  
 Phe Ile Thr Lys Leu Leu Asp Lys Asn Phe Arg Arg His Ile Ile Asn  
 1380 1385 1390  
 Asp Glu Glu Glu Glu Thr Arg Glu Arg Phe Gly Gly Glu Glu Glu Glu  
 1395 1400 1405  
 Glu Asp Asp Asp Glu Glu Phe Glu Asp Glu Glu Glu Gln Ala Glu  
 1410 1415 1420  
 Arg Glu Trp Gly Glu Glu Glu Gly Glu Ser Ala Tyr Asp Ile Ser Val  
 1425 1430 1435 1440  
 Ile Asn Asp Lys Asn Asn Thr Ile Gly His Asp Val Asp Ile Ile Leu  
 1445 1450 1455  
 Cys Asn Arg Lys Lys Leu Thr Leu Thr Lys Glu Asn Ser Val Phe Val

	1460		1465		1470
Asn	Glu His Ile Asp Ser Phe Met Val Gly Asn Leu Ile Gly Ala Glu				
	1475		1480		1485
Gly	Ser Leu Ile Gln Ile Cys Phe Asp Asn Cys Thr Gly Glu Phe Glu				
	1490		1495		1500
Gly	Leu Pro Lys Phe Cys Leu Tyr Asp Ser Ser Ser Lys Asp Lys Asp				
1505		1510		1515	1520
Thr Ile Pro					

<210> 94  
 <211> 2919  
 <212> DNA  
 <213> SHRIMP

<400> 94

atggatgaac	gacgaagaga	tccgttactt	taccctacca	accgaagtat	gcgcttcacc	60
gcgcaaataa	cggtattcgt	gaccgtgttc	gtgttaggct	gtatttttgc	gctagtctgc	120
gctgcaatgg	cctataatgt	agccaaacca	atgtctgtta	attttcaagc	tatacacgaa	180
ttagggatga	aaagtaaatt	gaaagcagtt	caaggagcta	accctgaaaa	gacactagaa	240
gaatacctag	aagccagagg	taggcatgac	ggggtggaag	atgcaagcaa	ttacccacct	300
caccccgctc	tcctggacat	gatgaatttg	actgttaaag	ggaataaatg	gaacgttccg	360
tcagaaacga	aggaaaggaa	ttctcgggtc	gaaagtcatt	atttagctgc	aaatagatcc	420
tcattctctc	tcgtgcctga	acaccatata	gatagattga	gtgaggccac	catcgaaaaa	480
tctaacaatt	atctagatgc	tgtatcgggg	aaaaagttaa	gacaaaaggat	ggccaatttg	540
aaggataata	tagaaaaaga	cgatactgaa	ttgtacgatt	ctttatttgg	tgtacatgat	600
atccatcacc	atagtgcatt	aggcgtaagt	ggtgacgctc	ctcctcctcc	tccatctaca	660
tcagaaggac	atgatgaaga	tgtggatatt	ttggcctaca	atactggcgg	gtactgttcc	720
aacccagttc	ctttgaaaga	gggacaaact	tgcacatctg	tgtgttatac	ctcgagagca	780
gttcgtgtga	tgacaccatt	tggtgctgga	ggaacattta	tcacacataa	atctggagaa	840
gatcctaaac	cttattgttg	gtcaggaaac	gtgcccgttg	accacataga	aacatcccca	900
accactggag	aacgtgtagt	taaagagtgt	tctgtgcaca	catctatagt	cgttctgaca	960
gatgatgggg	gctggcaatg	cagacctaaa	tacccaacat	atttcggagg	ttcgggagga	1020
acatcgatga	ctgcttgccg	tttcaatcct	tcaaccacca	aaggaccacc	acctccttca	1080
tcttcgacac	caatctatta	tgatgtatta	aagaaacaac	aaatacggaa	tcatacagaa	1140
ttccgcaact	cttcttacat	ctccaaattg	cgtcaatctt	cttccttggc	ggaattcaaa	1200
attaaatgca	acgatcctga	atttttatac	aaaaacccca	tcacctgttt	ctgtaataat	1260
aagaaggatg	tactaaataa	cgaccttctt	tctcaagatg	taacaaagga	tatgaaattc	1320
agaggatgtg	atgaatgtat	ggaaaacccc	tgtgttatga	tgcccaacat	agacccttcg	1380
tttgttacgt	ttgatgtgag	cacaatgaag	tgtgtaccgg	gcgttaataa	tccccaagac	1440
tcaaacaggc	atgcaataat	aggcgatgac	aggacaccgt	tagtggggac	tgttcctgcc	1500
atgggaattt	tcttgccgca	ccaatctaaa	agaggggacc	agattcacca	gcaaagacct	1560
aaatcaagta	tcgacgaaac	tactgccaac	aaaattgcac	tggcccaagc	gccccatcca	1620
acgcctttta	acctggatgc	aacaaatact	tctaagaatg	tgctctttgt	accaataacct	1680
agcactgttt	tacctcctct	agaaaatatt	ccccatgtaa	tcattccgcc	gtcttcattg	1740
ttacatagaa	gttggttagc	tcccgtcctg	aacaaacctt	cctcggggca	gcataggcca	1800
ttctgtactg	caccctttta	cattgagcca	gcagctaatt	ttttggccgg	aaacataacct	1860
caaaaacctt	atgaacatag	tatgtttggc	acagaattgt	tgcgaaatag	tcgcattggt	1920
tcgggttagt	ttcacggcgg	atctgaactt	ttattctcta	cacttttgag	tcaaaaataa	1980
ccctcctctt	atatcagaac	tccccctgga	ggtactccag	ctccagagta	caattctaca	2040
ggtgaccaa	ggctggaaga	aataagggac	ttttttgaac	gtaattttta	cgatgagagg	2100
agattgtctc	agacagaata	cgtaataaag	aaacacgcga	gagggatgag	gacaagtga	2160
atataatctc	aatcaagttc	ttgggatagt	ttaatgaaga	ggaaagaatt	tctaagacat	2220
atcataaaaa	aatctgagga	tacttttgta	ttgaaagagg	ggttattaat	gcgttcatac	2280
ggaccttatg	ctgctactgt	gctagcgcga	gatattgttg	atttagatta	cctaaaagga	2340
aaacctgcat	caaaaacttc	cagtacattg	aaagtgtcca	atcctttgca	gtacgcgttt	2400
cccacatcct	actctgttct	tcccgaagaa	ggagctaccg	acgatatttt	ttcagtagac	2460
cacaatagga	tatttgacag	cgaaacaatc	cccagctatt	ttgattgctc	caatgtaact	2520
cccggaagtg	aaaaattgtt	cggaacatca	tcttcctcat	ccgagtacag	agtggaatatt	2580
gacgacgatg	cgtgggggtt	gcaatcgttt	cgtttggtac	ataaccccaa	gagtgggccc	2640

gtagtacagt cagaccctcg tctagcggtt gatgcgtcaa acatttcctc aacccccgaa 2700  
 ggagctacaa taacaccctt ctctctattc aagaagtcac tcgtcgagtg ggggcataag 2760  
 aaggcggacg tgcaagaaac ttcgtgggtc agggacgggtg tggatacttc tgaggcttat 2820  
 agacgattac ttgtagagac tagtatggct gtacgtaact cctggttctc tttagcatgg 2880  
 gaaaataaaa actattattt tgccaaaaat agcagctaa 2919

<210> 95  
 <211> 962  
 <212> PRT  
 <213> SHRIMP

<400> 95

Met	Asp	Glu	Arg	Arg	Arg	Asp	Pro	Leu	Leu	Tyr	Pro	Thr	Asn	Arg	Ser
1				5					10					15	
Met	Arg	Phe	Thr	Ala	Gln	Ile	Thr	Leu	Phe	Val	Thr	Val	Phe	Val	Leu
		20						25					30		
Gly	Cys	Ile	Phe	Ala	Leu	Val	Cys	Ala	Ala	Met	Ala	Tyr	Asn	Val	Ala
		35					40					45			
Lys	Pro	Met	Ser	Val	Asn	Phe	Gln	Ala	Ile	His	Glu	Leu	Gly	Met	Lys
	50					55					60				
Ser	Lys	Leu	Lys	Ala	Val	Gln	Gly	Ala	Asn	Pro	Glu	Lys	Thr	Leu	Glu
	65				70				75						80
Glu	Tyr	Leu	Glu	Arg	Arg	His	Asp	Gly	Val	Glu	Asp	Asn	Tyr	Pro	Pro
				85					90					95	
His	Pro	Ala	Leu	Leu	Asp	Met	Met	Asn	Leu	Thr	Val	Lys	Gly	Asn	Lys
			100					105					110		
Trp	Asn	Val	Pro	Ser	Glu	Thr	Lys	Glu	Arg	Asn	Ser	Arg	Phe	Glu	Ser
		115					120					125			
His	Asp	Leu	Ala	Ala	Asn	Arg	Ser	Ser	Ser	Leu	Leu	Val	Pro	Glu	His
	130					135					140				
His	Ile	Asp	Arg	Leu	Ser	Glu	Ala	Thr	Ile	Glu	Lys	Ser	Asn	Lys	Tyr
	145					150				155					160
Leu	Asp	Ala	Val	Ser	Gly	Lys	Lys	Phe	Arg	Gln	Arg	Met	Val	Asn	Leu
			165					170						175	
Lys	Asp	Asn	Ile	Glu	Lys	Asp	Asp	Thr	Glu	Leu	Tyr	Asp	Ser	Leu	Phe
			180					185					190		
Gly	Val	His	Asp	Ile	His	His	His	Ser	Ala	Ser	Gly	Val	Ser	Gly	Asp
		195					200					205			
Ala	Pro	Pro	Pro	Pro	Pro	Ser	Thr	Ser	Glu	Gly	His	Asp	Glu	Asp	Val
	210					215					220				
Asp	Ile	Leu	Ala	Tyr	Asn	Thr	Gly	Gly	Tyr	Cys	Ser	Asn	Pro	Val	Pro
	225				230					235					240
Leu	Lys	Glu	Gly	Gln	Thr	Cys	Thr	Ser	Val	Cys	Tyr	Thr	Ser	Arg	Ala
				245					250					255	
Val	Arg	Val	Met	Thr	Pro	Phe	Val	Ala	Gly	Gly	Thr	Phe	Ile	Thr	His
			260					265					270		
Lys	Ser	Gly	Glu	Asp	Pro	Lys	Pro	Tyr	Cys	Trp	Ser	Gly	Asn	Val	Pro
		275					280					285			
Gly	Asp	His	Ile	Glu	Thr	Ser	Pro	Thr	Thr	Gly	Glu	Arg	Val	Val	Lys
	290					295					300				
Glu	Cys	Ser	Val	His	Thr	Ser	Ile	Val	Val	Leu	Thr	Asp	Asp	Gly	Gly
	305				310					315					320
Trp	Gln	Cys	Arg	Pro	Lys	Tyr	Pro	Thr	Tyr	Phe	Gly	Gly	Ser	Gly	Gly
				325					330					335	
Thr	Ser	Met	Thr	Ala	Cys	Ala	Phe	Asn	Pro	Ser	Thr	His	Lys	Gly	Pro
			340					345					350		
Pro	Pro	Pro	Ser	Ser	Ser	Thr	Pro	Ile	Tyr	Tyr	Asp	Val	Leu	Lys	Lys
			355				360					365			
Gln	Gln	Ile	Arg	Asn	His	Thr	Glu	Phe	Arg	Asn	Ser	Ser	Tyr	Ile	Ser
	370					375					380				
Lys	Leu	Arg	Gln	Ser	Ser	Ser	Leu	Ala	Glu	Phe	Lys	Ile	Lys	Cys	Asn





[illegible]

<210>	96
<211>	681
<212>	DNA
<213>	SHRIMP

<400> 96						
atggcctcag	tctttgaaga	ccctgctgat	ctctttgccca	acatggactt	gactggcaaa	60
gttctctaccc	gcccccaatat	cctgttcttc	gaaggcctac	tcccccaattc	tggcaaggag	120
attatcgaga	accgcctgat	ccataaaggg	aagtgtggag	catttgaagc	agatagctaa	180
ttggcgtatt	tcttcccttc	caacaatgaa	gaaaatacga	agaaactcaa	catgtgtttc	240
cagatcaagt	cgaattgcct	gtctttcttt	attagggatt	ttttgaacga	ctggttggag	300
gagatcaagg	actgtggacc	atactgtact	ttttcccaat	acatggatgg	ggacaaagaa	360
actctcggaa	acagttgtttt	tggacaagac	tttactattg	tgcgcattga	ctggatcgac	420
aagggtgtaa	cattctatat	atttgttgat	ggatctgatt	ctatggagaa	tatggcctct	480
ttgtggatgt	gtgacaaact	gaagagaatg	aatgccaatg	tggtaaaagt	gtttgttgat	540
aatgcatacta	agccaaaatt	ttctgtatgt	aaaacatgta	ggtgggagtt	cccagggtcca	600
gtgtcgtacg	ttattgaggg	ccacggaatg	ggacattcag	atttgtcatg	tgatgagatt	660
tctgagtttt	tggtagaata	a				681

```
<210> 97
<211> 224
<212> PRT
<213> SHRIMP
```

<400>	97															
Met	Ala	Ser	Val	Phe	Glu	Asp	Pro	Ala	Asp	Leu	Phe	Ala	Asn	Met	Asp	
1				5					10					15		
Leu	Thr	Gly	Lys	Val	Pro	Trp	Asn	Ile	Leu	Phe	Phe	Glu	Gly	Leu	Leu	
			20					25					30			
Pro	Asn	Ser	Gly	Lys	Glu	Ile	Met	Glu	Asn	Arg	Leu	Ile	His	Lys	Gly	
		35					40					45				
Lys	Cys	Gly	Ala	Phe	Glu	Ala	Asp	Thr	Gln	Leu	Ala	Tyr	Phe	Phe	Pro	
	50					55					60					
Ser	Asn	Asn	Glu	Glu	Asn	Thr	Lys	Lys	Leu	Asn	Ile	Gly	Phe	Gln	Ile	
65					70					75					80	
Lys	Ser	Asn	Cys	Leu	Ser	Phe	Phe	Ile	Arg	Asp	Phe	Leu	Asn	Asp	Trp	
				85					90					95		
Leu	Glu	Glu	Ile	Lys	Asp	Cys	Gly	Pro	Tyr	Cys	Thr	Phe	Ser	Gln	Tyr	
			100					105					110			
Met	Asp	Gly	Asp	Lys	Glu	Ile	Phe	Gly	Asn	Ser	Val	Phe	Gly	Gln	Asp	
		115					120					125				
Phe	Thr	Ile	Val	Ala	Met	Asp	Trp	Ile	Asp	Lys	Gly	Val	Thr	Phe	Tyr	
	130					135					140					
Ile	Phe	Val	Asp	Gly	Ser	Asp	Ser	Met	Glu	Asn	Met	Ala	Ser	Leu	Trp	
145					150					155					160	
Met	Cys	Asp	Lys	Leu	Lys	Arg	Met	Asn	Ala	Asn	Val	Val	Lys	Val	Phe	
				165					170						175	

Val	Asp	Asn	Ala	Ser	Lys	Pro	Lys	Phe	Ser	Val	Cys	Lys	Thr	Cys	Arg
			180					185					190		
Trp	Glu	Phe	Pro	Gly	Pro	Val	Ser	Tyr	Val	Ile	Glu	Gly	His	Gly	Met
		195					200					205			
Gly	His	Ser	Asp	Leu	Ser	Cys	Asp	Glu	Ile	Ser	Glu	Phe	Leu	Val	Gln
	210					215					220				

<210> 98  
 <211> 747  
 <212> DNA  
 <213> SHRIMP

<400> 98  
 atgattgccca tcgccaatca caaacacgat gtctctgatg cactagttgg agcccatggg 60  
 gcaaagatta atatgttgta tggtaaactct agtactttaa gtgtaactga agcagcatta 120  
 ttgatgttca atgataaccgc attaacacag tttgcccaga gaggatacga gcctagttata 180  
 cccaccatat tgaaagctgc ttttagatttc tctctccaag aagaagaacc ccttggttgct 240  
 gccaccggtc tcgatgtcaa taaagcacct cgttcttggc caatactgaa ttgtcgcttg 300  
 gggatatattg catcctcaaa ttatccttgg gctgaacaca taatttctgg ggataaggaa 360  
 gaaattaaaaa gggctctaga agaacatgag aagaatgcta atgtgcgttt cgacagcgat 420  
 aattgtccag tgtgtttaga agatttcagt agtaccaata tcatcaggac gacacgctgt 480  
 ggacattgta ttgatgaaaa atgttgggac agattggtgt tgagtacgca acgtggagaa 540  
 attaccgggt gtcctgtatg cagagaacgt acttccttaa gacctgacgc tgatcaagtt 600  
 aaagagatgt tggttgaacc aatagtgtct tgtaaaagaa tggcagtgcc tgatgaacaa 660  
 gtatcttgta aacgtagaag aatagggtat aatagatacc agttcctaataaatgatgtg 720  
 tggacagatg agtccgaaac tgtatga 747

<210> 99  
 <211> 248  
 <212> PRT  
 <213> SHRIMP

<400> 99  
 Met Ile Ala Ile Ala Asn His Lys His Asp Val Ser Asp Ala Leu Val  
 1 5 10 15  
 Gly Ala His Gly Ala Lys Ile Asn Met Leu Tyr Gly Lys Ser Ser Thr  
 20 25 30  
 Leu Ser Val Thr Glu Ala Ala Leu Leu Met Phe Asn Asp Thr Ala Leu  
 35 40 45  
 Thr Gln Phe Ala Gln Arg Gly Tyr Glu Pro Ser Ile Pro Thr Ile Leu  
 50 55 60  
 Lys Ala Ala Leu Asp Phe Ser Leu Gln Glu Glu Pro Leu Val Ala  
 65 70 75 80  
 Ala Thr Gly Leu Asp Val Asn Lys Ala Pro Arg Ser Trp Pro Ile Leu  
 85 90 95  
 Asn Cys Arg Leu Gly Tyr Ile Ala Ser Ser Asn Tyr Pro Trp Ala Glu  
 100 105 110  
 His Ile Ile Ser Gly Asp Lys Glu Ile Lys Arg Ala Leu Glu Glu  
 115 120 125  
 His Glu Lys Asn Ala Asn Val Arg Phe Asp Ser Asp Asn Cys Pro Val  
 130 135 140  
 Cys Leu Glu Asp Phe Ser Ser Thr Asn Ile Ile Arg Thr Thr Arg Cys  
 145 150 155 160  
 Gly His Cys Ile Asp Glu Lys Cys Trp Asp Arg Leu Val Leu Ser Thr  
 165 170 175  
 Gln Arg Gly Glu Ile Thr Arg Cys Pro Val Cys Arg Glu Arg Thr Ser  
 180 185 190  
 Leu Arg Pro Asp Ala Asp Gln Val Lys Glu Met Leu Val Glu Pro Ile  
 195 200 205  
 Val Ser Cys Lys Arg Met Ala Val Pro Asp Glu Gln Val Ser Cys Lys

WO 01/38351

PCT/US00/28888

183

210 215 220  
 Arg Arg Arg Ile Gly Tyr Asn Arg Tyr Gln Phe Leu Ile Asn Asp Val  
 225 230 235 240  
 Trp Thr Asp Glu Ser Glu Thr Val  
 245

<210> 100  
 <211> 1788  
 <212> DNA  
 <213> SHRIMP

<400> 100  
 atggctgaag cagctccacg ataccgtcag gtgcttgaag aagtacttga aaacattgaa 60  
 ccatatatgt catttctgga cgttttcaca gaaagggaaat tggcccttct gaatgacata 120  
 attacctcca gaaattctcc tcctgttcct tcaagtagtt tcaagaaatt agacaataaa 180  
 gaagagttta gagatattat ctacttcttt atcaacaaca ataccaagtc tgattcttcc 240  
 cccactctgcg agggaaatgac ttttatcaac gcattgacaa ccgtctgcaa aaccttcaga 300  
 ggccttttacg aaaacatcca cgacgacttt ttgttcgtaa aatattctct tctggtctct 360  
 atggataatg gatttttgag acgcgagacg cacggcatca agtttggcac tgggtgatgac 420  
 agcagaactg gattcaagtt tacttcaaag gaacaggctg aggaagaaag agagaagggt 480  
 atgagaagga tcaagaagtt ggacggtggt ttggctagcc tgaaaaagtc tactagttct 540  
 gcaagaagtg gtattgtttt ctacgttgaa aaatgttcga gtgttattag attcaggctc 600  
 ttttcaagaa tcgtcaatat cacctctgat tacgtggctg aaatgaaaaa atctgcacca 660  
 cttgaacctt ttgacatatc ttctggatac aagtattttg tggacgaatc tccttgtggt 720  
 acaaaggcaa aacgactgat atccaatggc aattttatta tcgggagacc ttttcttgc 780  
 ctagaaacat caccatcatc cgtgtcaact gacttcagag aagaaatgaa catggacgct 840  
 agatctatag ctagattgaa ttggaccaac gaagaaaggg ctagtgctta caggagtgtg 900  
 attatcaagt cttttctttc ctcgatagaa gaagaaatgg tagaagagta ctgtgagact 960  
 actacaaaaa ctgttgctga aatggcagta gagtttggtg atgtgtttat agagaaggct 1020  
 gaaacaatcc agcattttca aaccttttac agtatatttg acacgatgcc aaaattctct 1080  
 gccgaaatga tggacaatat tctaaaaaat gttgcaataa acgaagcagt gggtagtggt 1140  
 ttgtgtggtg caatactggt gtggatgatt aacagtaggc cctttgaaga gattgattac 1200  
 aattacttca agatctggtt gagggagatt atggtaagaa aaaagaccga caaactgtgc 1260  
 gataatctta ttgtgaaaag gatcgtatca cataaaaacg ttgtgataac agaccctcat 1320  
 gaagttaaag gctatggttag attgtgtgta aaagtctcgt gtttcatgga agatcttgaa 1380  
 gcttttctta ccaagaatcc gtggctcaaa cacacttatt ttgatgaaaa ggggaatact 1440  
 ctattgtggtt attgtatcat taacaaatat tcccatacta gcaaaactagt caaacaagaa 1500  
 aaacttaaca ttctgaagcc ttctgcgaaa ggcattgtcac ctctaattggt ttgcgctgca 1560  
 atatcttccc cctttaccac aagagtaggt attgaaattc taacaacaaa cagcttggcc 1620  
 ttttccttta ttaatgaaaa taatgaaaac gtattccatg ctgcagctgt tgcaacctcg 1680  
 tgcaattttc ttgatgctct tgctaaaaaa tacaagaata taatatacga tttcgataga 1740  
 agtatagtga atgctagaag gcgagcgtat gtgcaacgcc cctaataga 1788

<210> 101  
 <211> 586  
 <212> PRT  
 <213> SHRIMP

<400> 101  
 Met Ala Glu Ala Ala Pro Arg Tyr Arg Gln Val Leu Glu Glu Val Leu  
 1 5 10 15  
 Glu Asn Ile Glu Pro Tyr Met Ser Phe Leu Asp Val Phe Thr Glu Arg  
 20 25 30  
 Glu Leu Ala Leu Leu Asn Asp Ile Ile Thr Ser Arg Asn Ser Pro Pro  
 35 40 45  
 Val Pro Ser Ser Ser Phe Lys Lys Leu Asp Asn Lys Glu Glu Phe Arg  
 50 55 60  
 Asp Ile Ile Tyr Phe Phe Ile Asn Asn Asn Thr Lys Ser Asp Ser Ser  
 65 70 75 80  
 Pro Ile Cys Glu Gly Met Thr Phe Ile Asn Ala Leu Thr Thr Val Cys

				85					90					95	
Lys	Thr	Phe	Arg	Gly	Glu	Asn	Ile	His	Asp	Asp	Phe	Leu	Phe	Val	Lys
			100					105					110		
Tyr	Ser	Leu	Leu	Val	Ser	Met	Asp	Asn	Gly	Phe	Leu	Arg	Arg	Glu	Thr
		115					120					125			
His	Gly	Ile	Lys	Phe	Gly	Thr	Gly	Asp	Asp	Ser	Arg	Thr	Gly	Phe	Lys
		130					135					140			
Phe	Thr	Ser	Lys	Glu	Gln	Ala	Glu	Glu	Glu	Arg	Glu	Lys	Val	Met	Arg
145					150					155					160
Arg	Ile	Lys	Lys	Leu	Asp	Gly	Val	Leu	Ala	Ser	Leu	Lys	Lys	Ser	Thr
				165					170					175	
Ser	Ser	Ala	Arg	Ser	Gly	Ile	Val	Phe	Tyr	Val	Glu	Lys	Cys	Ser	Ser
			180					185					190		
Val	Ile	Arg	Phe	Arg	Leu	Phe	Ser	Arg	Ile	Val	Asn	Ile	Thr	Ser	Asp
		195					200					205			
Tyr	Val	Ala	Glu	Met	Lys	Lys	Ser	Ala	Pro	Leu	Glu	Pro	Phe	Asp	Ile
		210				215					220				
Ser	Phe	Gly	Tyr	Lys	Tyr	Phe	Val	Asp	Glu	Ser	Pro	Cys	Val	Thr	Lys
225					230					235					240
Ala	Lys	Arg	Leu	Ile	Ser	Asn	Gly	Asn	Phe	Ile	Ile	Gly	Arg	Pro	Phe
				245					250					255	
Ser	Cys	Leu	Glu	Thr	Ser	Pro	Ser	Ser	Val	Ser	Thr	Asp	Phe	Arg	Glu
			260					265					270		
Glu	Met	Asn	Met	Asp	Ala	Arg	Ser	Ile	Ala	Arg	Leu	Asn	Trp	Thr	Asn
		275					280					285			
Glu	Glu	Arg	Ala	Ser	Ala	Tyr	Arg	Ser	Val	Ile	Ile	Lys	Ser	Phe	Leu
		290				295					300				
Ser	Ser	Ile	Glu	Glu	Glu	Met	Val	Glu	Glu	Tyr	Cys	Glu	Thr	Thr	Thr
305					310					315					320
Lys	Thr	Val	Ala	Glu	Met	Ala	Val	Glu	Phe	Val	Asp	Val	Phe	Ile	Glu
				325					330					335	
Lys	Ala	Glu	Thr	Ile	Gln	His	Phe	Gln	Thr	Lys	Ile	Phe	Asp	Thr	Met
			340					345					350		
Pro	Lys	Phe	Ser	Ala	Glu	Met	Met	Asp	Asn	Ile	Leu	Lys	Asn	Val	Ala
		355					360					365			
Ile	Asn	Glu	Ala	Val	Gly	Ser	Gly	Leu	Cys	Gly	Ala	Ile	Leu	Leu	Trp
		370				375					380				
Met	Ile	Asn	Ser	Arg	Pro	Phe	Glu	Glu	Ile	Asp	Tyr	Asn	Tyr	Phe	Lys
385					390					395					400
Ile	Cys	Leu	Arg	Glu	Ile	Met	Val	Arg	Lys	Lys	Thr	Asp	Lys	Leu	Cys
				405					410					415	
Asp	Asn	Leu	Ile	Val	Lys	Arg	Ile	Val	Ser	His	Lys	Asn	Val	Val	Ile
			420					425					430		
Thr	Asp	Phe	Val	Lys	Gly	Tyr	Val	Arg	Leu	Cys	Val	Lys	Val	Ser	Cys
		435					440		</						

WO 01/38351

185

PCT/US00/28888

Ala Arg Arg Arg Ala Met Val Gln Arg Pro  
580 585

<210> 102  
<211> 1197  
<212> DNA  
<213> SHRIMP

<400> 102  
atggccggaa ctgacatcat cagcagcagc agcagcggca gcagcagcag caagaagggga 60  
gggtgtatcg tcagcaagaa aggaaagaca ataaaagggga agaatatcgt ctttaagaca 120  
tcaatcaaaa cttcctcttc atcagaaatg atgaagaaac ataagaaaag aatggaaata 180  
aaggatatgg ttaagaagtg tgccagctgt aagaagggtg attatagctc atcaaccttg 240  
gaaaatgatg ctctgagagc atctatagaa agtacctgct cagcactcaa taggtttcct 300  
gaaataaagt atggggaagg ggagataggg gatgttttga gtgcaattag gctaattggcg 360  
ggatgtcttc ttgcaaagaa tgaaaagtcc ttttataagt ttttcttgag ggggttttcag 420  
tttgataaga atgggttcat gatgttgtct gaaggatga aaaggattga gaaaatgcat 480  
actaaaatag ctaagaagggt ttttggaggc tgtaaggccg cccctctaaa agaggacagg 540  
gagggcaaaa taccttgcca ggagttccat aaacctagtt catataaggg tgaatatacc 600  
actcctttac cccccactcc tgctcctgtc aagggtgtgc cccctcttct tccctataag 660  
aatgtaaaaa ataagccagt ttttgtgcct gacttggctg taggggaggc taagaaacca 720  
tgctgggttc acaaactctt ctctgatgac cctgaggaaa gaaaacggct ctttgagagg 780  
catcaggcag gaaggcgtga cgccctcatg gaagattatg gtgttattcc taataatgac 840  
aatgaagcag aagacactga gaggtttgtg tctaacgcac ttgaatacca ggcacagatg 900  
ttggagttgc tagacacggc taatatgccc cctcccgcac ccacacctgt tagaagggga 960  
agaacaagga ttgtgaggga ctatgatgct agtcctgtac cttctcctta ttcttcacct 1020  
cttcacaccc cctttgatgc accaaatgtt aatttgaacc caggttcagg taggatgggt 1080  
gatagggtca gagacggcag acgcaacact tcacggagga catctgccgt catggccagg 1140  
aggattaatc agctccagca ccagtttctg tactatagct ctgatagtga tttttaa 1197

<210> 103  
<211> 396  
<212> PRT  
<213> SHRIMP

<400> 103  
Met Ala Gly Thr Asp Ile Ile Ser Ser Ser Ser Ser Gly Ser Ser Ser  
1 5 10 15  
Ser Lys Lys Gly Gly Cys Ile Val Ser Lys Lys Gly Lys Thr Ile Lys  
20 25 30  
Gly Lys Asn Ile Val Phe Lys Thr Ser Ile Lys Thr Ser Ser Ser  
35 40 45  
Glu Met Met Lys Lys His Lys Lys Arg Met Glu Ile Lys Asp Met Val  
50 55 60  
Lys Lys Cys Ala Ser Cys Lys Lys Val Asp Tyr Ser Ser Ser Thr Leu  
65 70 75 80  
Glu Asn Asp Ala Leu Arg Ala Ser Ile Glu Ser Thr Cys Ser Ala Leu  
85 90 95  
Asn Arg Phe Pro Glu Ile Lys Tyr Gly Glu Gly Glu Ile Gly Asp Val  
100 105 110  
Leu Ser Ala Ile Arg Leu Met Ala Gly Cys Leu Leu Ala Lys Asn Glu  
115 120 125  
Lys Ser Phe Tyr Lys Phe Phe Leu Arg Gly Phe Gln Phe Asp Lys Asn  
130 135 140  
Gly Phe Met Met Leu Ser Glu Gly Met Lys Arg Ile Glu Lys Met His  
145 150 155 160  
Thr Lys Ile Ala Lys Lys Val Phe Gly Gly Cys Lys Ala Ala Pro Leu  
165 170 175  
Lys Glu Asp Arg Glu Gly Lys Ile Pro Cys Gln Glu Phe His Lys Pro  
180 185 190

WO 01/38351

PCT/US00/28888

186

Ser Ser Tyr Lys Gly Glu Tyr Thr Thr Pro Leu Pro Pro Thr Pro Ala  
 195 200 205  
 Pro Val Lys Val Leu Pro Pro Leu Leu Pro Tyr Lys Asn Val Lys Asn  
 210 215 220  
 Lys Pro Val Phe Val Pro Asp Leu Ala Val Gly Glu Ala Lys Lys Pro  
 225 230 235 240  
 Cys Trp Val His Lys Leu Phe Ser Asp Asp Pro Glu Glu Arg Lys Arg  
 245 250 255  
 Leu Phe Glu Arg His Gln Ala Gly Arg Arg Asp Ala Leu Met Glu Asp  
 260 265 270  
 Tyr Gly Val Ile Pro Asn Asn Asp Asn Glu Ala Glu Asp Thr Glu Arg  
 275 280 285  
 Phe Val Ser Asn Ala Leu Glu Tyr Gln Ala Gln Met Leu Glu Leu Leu  
 290 295 300  
 Asp Thr Ala Asn Met Pro Pro Pro Ala Ser Thr Pro Val Arg Arg Gly  
 305 310 315 320  
 Arg Thr Arg Ile Val Arg Asp Tyr Asp Asp Val Pro Ser Pro Tyr Ser  
 325 330 335  
 Ser Pro Leu His Thr Pro Phe Asp Ala Pro Asn Val Asn Leu Asn Pro  
 340 345 350  
 Gly Ser Gly Arg Met Val Asp Arg Val Arg Asp Gly Arg Arg Asn Thr  
 355 360 365  
 Ser Arg Arg Thr Ser Ala Val Met Ala Arg Arg Ile Asn Gln Leu Gln  
 370 375 380  
 His Gln Phe Leu Tyr Tyr Ser Ser Asp Ser Asp Phe  
 385 390 395

&lt;210&gt; 104

&lt;211&gt; 3796

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 104

atggcgctcct cggggggatt ctttacagga atagatgacc ttttcaagac agtgattcaa 60  
 caagaaaaaac aagagaaaaa taaaccaact caagcaccag aaacagaacc aaaaccaggg 120  
 ccatctcaag ctccagatcc agtcccagac ccagttccta aaacaccaac caatttctgt 180  
 cctcctccac ctaatcctct cctcctcct cctcctcctc ctcctaagcc ctcaagagaa 240  
 gaacggctaa agacgtcaaa aatacgttta aacaaagctc ttagtgatat tgttgaagcc 300  
 acaaacgagc gtgttgatgc gttgaaagag aaccaagcat taaatacaga atatgacaag 360  
 aaggataatt acttccagggt tttaaagtgc tcgataaacac cttctgtacc aacagctatt 420  
 ataggcgcac acgtgaaaca ggtggccaaa agtagcgaaa tcgaactggc cgtgaacgaa 480  
 ctcgatataa aaaataagtg ctcttttagtg tacaacgaaa atgagtcggt aaaatttttc 540  
 agggaccatg agaaccttat actacaaatt gccgtccagt tattctctag gcacgataac 600  
 accaaatgcg tgggggcaga aatatgtgtt aaaggcaacg aaaaaaacaa gtttgtaaac 660  
 aaactggtgg taaaaaaact ccccaatgca ccatcctcat cttcaactgt gctagaaatt 720  
 agaggcgcta ccagaaattt actggagaat aatttcaaca agggagaaaa taacactgtc 780  
 aatgaaaaca aggacattcc tccttcagaa cgagccaacc tggacacgac caaggcagaa 840  
 atatcgacag tcttttccac tctacacaga ctggacacta aaaggaagct tttctttaaa 900  
 ggcaaacactt tttatcaacg aaaaccaaca ttcgataata aattcaggtg gacagaagtt 960  
 atagggtgga cagaaagtga agcatcaaaa caaaccacta aatcgctaga caagccaacg 1020  
 gacgacaatt tattcgtgct accccattct ttcaataatt tggcagacca cttacgtttg 1080  
 aaattttaaaa acgtcctcta taaaaatagt accgcacatc ccggcaaacg aaattactac 1140  
 aagactcaag agacgcta ataatccccag attgattcgg cgaaagagta caagatgggtc 1200  
 tttgcagaaa tcgacaagtg tttggatgtt cttttggcca tagggaagaa tgacaaatac 1260  
 acaaaaagca ctgtcatata atatagagga aagtttagaa ggtattta atctgtctac 1320  
 gccttttatg ctctaaataa ggcaaaacat tctcgcgag tatccctct accattta at 1380  
 ttctttaacc ttttctcctt catgtattgt catggtccgt ttctccattc cgccagtttt 1440  
 ttgtccacat tgacgttcgt ctatcaacac atgtttttcc ccatgggcac agccgcccc 1500  
 tccgtctcag ccaagcgggt catggatatc gattccgccc taatgaaagg aggaaagggg 1560  
 gtgggtgtga gggatttttg ttcaccttca aaaacaagtc tccatacaag aacattgggtg 1620

```

tctttcttag gttttgctga aatggctatg ggaacaatga cggctctctt atctgggtgta 1680
gaagtgcgtg tatctccagc tctccaacaa aggatatcta aatccctaga aagatgggtg 1740
gattcagtc tctttatata tttcaccttt gttttattcc acagattcag tgggtgcgaaa 1800
aaagtatcac tcgaatcggc gcttcgcctc atcatggggc agacgcacgc ccacacaaat 1860
aaggtgaggg ccgccaagag atgccgaata gaagcagcgg aaatggaagg tgtggaagaa 1920
gaagaggcgg gcctgacact ctcttatgcc catctattgg gtcttcctta ctctatacaa 1980
aaagccctcg gattacctgt ccctaagata aaccctctca tgacagcatc ttcttctcaa 2040
tacaatttag gggattttgt aggcgtggaa caacttctaa aggctaagag agagtttcca 2100
gccgaaggag aaaccgcagg atttctcggc atgtttgata atctagtga agattctatt 2160
gacaaatact acggcggaag agccttttca gacgtggttg aaaatgtaaa acaaggcatg 2220
gaacaaaaca caccgatga cacatcttca gcgttgatga cacctatccc taaagcattc 2280
tacgaagaag aaaaggatgt tccacagcag gaagaaaatt ctacacaaca aagatataga 2340
ttgaatagag acgtggagga atatttaatg gcttctccta tgaagatggg gtttgtgtct 2400
atactcgata aaactaacca aaaagaacgt ttcattgtctg ttggggatat tgcccttctg 2460
gccgtgtggt gcaaaaggaa cgtactgaaa aaggattgga acgaatacgc tatcgctaaa 2520
ggcaactacg aatggcttgg tgctaaaatg tgcaaccatt tacttttagc tgatttagtg 2580
aattttggaa tattaggtga cttgaaaata accaataaac ttgacacaaa taccgacacc 2640
tttcacagag acagtgatag attaccctca gttgcagatc agaaaaaatt tataaaaaac 2700
acatccctat ctgatcgaaa acaattggcc cttgttcact cgtgcgttaa cgtgagcacc 2760
cgaacccacg taggaagagt gactgcaaca tcatgggctg tcgatgcgct tcgtacctat 2820
acaagaggtg ataaagacat gtttgccgcc ctatcttcat cgctggatat gtaccatctt 2880
gggcacacga attcagctaa ttttgttcca tattttagta gaaattacct atgtaacgaa 2940
caagagaatg gattgtgggg gtatactcgc agaacctctg aaaaattggc caaagaagaa 3000
ttgggaagag gacgtttagg gggcctgaat aaggtagggg tggctaaaac agaactggct 3060
gctgcagcca ttgcaatttc ttctgcctta gatatggggg aagtagaagc tgtaatggac 3120
gactcttcta aagtgagaaa aatagcctcc acctgcttaa atgttaatgc agccaaggct 3180
tcggccgcca gagaaaaggc gagagaagct agtattaac gtcttcttct ggccactaat 3240
gcaccagcag ctggttcac cagaaacagt aacaggtttc tcctcaaaga tttgtggggg 3300
ttcttttctg acccagacaa gcgccagaag cttataaagg gtgaagcagt ttctgtacta 3360
tgtcccaata caggatttct tcatgctgct gttcctgatt ttgttattga gtattccttc 3420
gaaagtgaac cctctatagt gagattacgt ttgagactga ttaaaccctga aaaacaagac 3480
gaaatgggtat gcccttcaac agctcccga gctaataaga agaggaaatt agtaaggaat 3540
aatcaagacg ctgtactgac gttggatgat gaagataaca tcgttaaata caacaaatat 3600
gatatggttg aagacgagga agcgcgtgaa agattacgcc accaggacaa acaatcggtt 3660
attgcagccc gtatcagtaa agtgtgtgag cggaaaaatc caaagaaaaa acgtcgttta 3720
gaagaccctg aattgcaaa gttggatgaa caattgatac gggaactggc tgccattgcc 3780
tactgacgag atctaa 3796

```

&lt;210&gt; 105

&lt;211&gt; 1255

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 105

```

Met Ala Ser Ser Gly Gly Phe Phe Thr Gly Ile Asp Asp Leu Phe Lys
 1          5          10          15
Thr Val Ile Gln Gln Glu Lys Gln Glu Lys Asn Lys Pro Thr Gln Ala
 20          25          30
Pro Glu Thr Glu Pro Lys Pro Gly Pro Ser Gln Ala Pro Asp Pro Val
 35          40          45
Pro Asp Pro Val Pro Lys Thr Pro Thr Asn Phe Cys Pro Pro Pro Pro
 50          55          60
Asn Pro Leu Pro Pro Pro Pro Pro Pro Pro Pro Lys Pro Ser Arg Glu
 65          70          75          80
Glu Arg Leu Lys Thr Ser Lys Ile Arg Leu Asn Lys Ala Leu Ser Asp
 85          90          95
Ile Val Glu Ala Thr Asn Glu Arg Val Asp Ala Leu Lys Glu Asn Gln
100          105          110
Ala Leu Asn Thr Glu Tyr Asp Lys Lys Asp Asn Tyr Phe Gln Val Leu
115          120          125
Lys Cys Ser Ile Thr Pro Ser Val Pro Thr Ala Ile Ile Gly Ala His

```

130		135		140
Val Lys Gln	Val Ala Lys	Ser Ser Glu	Ile Glu Leu	Ala Val Asn Glu
145	150		155	160
Leu Asp Ile	Lys Asn Lys	Cys Ser Leu	Val Tyr Asn	Glu Asn Glu Ser
	165		170	175
Leu Lys Phe	Phe Arg Asp	His Glu Asn	Leu Ile Leu	Gln Ile Ala Val
	180		185	190
Gln Leu Phe	Ser Arg His	Asp Asn Thr	Lys Cys Val	Gly Ala Glu Ile
	195		200	205
Cys Val Lys	Gly Asn Glu	Lys Asn Lys	Phe Val Asn	Lys Leu Val Val
	210		215	220
Lys Lys Leu	Pro Asn Ala	Pro Ser Ser	Ser Thr Val	Leu Glu Ile
225	230		235	240
Arg Gly Ala	Thr Arg Asn	Leu Leu Glu	Asn Asn Phe	Asn Lys Gly Glu
	245		250	255
Asn Asn Thr	Val Asn Glu	Asn Lys Asp	Ile Pro Pro	Ser Ala Asn Leu
	260		265	270
Asp Thr Thr	Lys Ala Glu	Ile Ser His	Val Phe Ser	Thr Leu His Arg
	275		280	285
Leu Asp Thr	Lys Arg Lys	Leu Phe Phe	Lys Gly Asn	Thr Phe Tyr Gln
	290		295	300
Arg Lys Pro	Thr Phe Asp	Asn Lys Phe	Arg Trp Thr	Glu Val Ile Gly
305	310		315	320
Trp Thr Glu	Ser Glu Ala	Ser Lys Gln	Thr Thr Lys	Ser Leu Asp Lys
	325		330	335
Pro Thr Asp	Asp Asn Leu	Phe Val Leu	Pro His Ser	Phe Asn Asn Leu
	340		345	350
Ala Asp His	Leu Arg Leu	Lys Phe Lys	Asn Val Leu	Tyr Lys Asn Ser
	355		360	365
Thr Ala His	Pro Gly Lys	Arg Asn Tyr	Tyr Lys Thr	Gln Glu Thr Leu
	370		375	380
Ile Asn Pro	Gln Ile Asp	Ser Ala Lys	Glu Tyr Lys	Met Val Phe Ala
385	390		395	400
Glu Ile Asp	Lys Cys Leu	Asp Val Leu	Leu Ala Ile	Gly Lys Asn Asp
	405		410	415
Lys Tyr Thr	Lys Ser Thr	Val Ile Gln	Tyr Arg Gly	Lys Phe Arg Arg
	420		425	430
Tyr Leu Ile	Phe Cys Tyr	Ala Phe Tyr	Ala Leu Asn	Lys Ala Lys His
	435		440	445
Ser Arg Ala	Val Ser Pro	Leu Pro Phe	Asn Phe Phe	Asn Leu Phe Ser
	450		455	460
Phe Met Tyr	Cys His Gly	Pro Phe Leu	His Ser Ala	Ser Phe Leu Ser
465	470		475	480
Thr Leu Thr	Phe Val Tyr	Gln His Met	Phe Phe Pro	Met Gly Thr Ala
	485		490	495
Ala Pro Ser	Val Ser Ala	Lys Arg Leu	Met Asp Ile	Asp Ser Ala Leu
	500		505	510
Met Lys Gly	Gly Lys Gly	Val Gly Val	Arg Asp Phe	Gly Ser Pro Ser
	515		520	525
Lys Thr Ser	Leu His Thr	Arg Thr Leu	Val Ser Phe	Leu Gly Phe Ala
	530		535	540
Glu Met Ala	Met Gly Thr	Met Thr Ala	Leu Leu Ser	Gly Val Glu Val
545	550		555	560
Arg Val Ser	Pro Ala Leu	Gln Gln Arg	Ile Ser Lys	Ser Leu Glu Arg
	565		570	575
Trp Cys Asp	Ser Val Ile	Phe Ile Tyr	Phe Thr Phe	Val Leu Phe His
	580		585	590
Arg Phe Ser	Gly Ala Lys	Lys Val Ser	Leu Glu Ser	Ala Leu Arg Leu
	595		600	605
Ile Met Gly	Gln Thr His	Ala His Thr	Asn Lys Val	Arg Ala Ala Lys
610	615		620	



Arg	Cys	Arg	Ile	Glu	Ala	Ala	Glu	Met	Glu	Gly	Val	Glu	Glu	Glu	Glu
625					630					635					640
Ala	Gly	Leu	Thr	Leu	Ser	Tyr	Ala	His	Leu	Leu	Gly	Leu	Pro	Tyr	Ser
				645					650					655	
Ile	Gln	Lys	Ala	Leu	Gly	Leu	Pro	Val	Pro	Lys	Ile	Asn	Pro	Leu	Met
			660					665					670		
Thr	Ala	Ser	Ser	Ser	Gln	Tyr	Asn	Leu	Gly	Asp	Phe	Val	Gly	Val	Glu
		675					680					685			
Gln	Leu	Leu	Lys	Ala	Lys	Arg	Glu	Phe	Pro	Ala	Glu	Gly	Glu	Thr	Ala
	690					695					700				
Gly	Phe	Leu	Gly	Met	Phe	Asp	Asn	Leu	Val	Lys	Asp	Ser	Ile	Asp	Lys
705					710					715					720
Tyr	Tyr	Gly	Glu	Gly	Ala	Phe	Ser	Asp	Val	Val	Glu	Asn	Val	Lys	Gln
				725					730					735	
Gly	Met	Glu	Gln	Asn	Thr	Pro	Tyr	Asp	Thr	Ser	Ser	Ala	Leu	Met	Thr
			740					745					750		
Pro	Ile	Pro	Lys	Ala	Phe	Tyr	Glu	Glu	Glu	Lys	Asp	Val	Pro	Gln	Gln
		755					760					765			
Glu	Glu	Asn	Ser	Thr	Gln	Gln	Arg	Tyr	Arg	Leu	Asn	Arg	Asp	Val	Glu
	770					775					780				
Glu	Tyr	Leu	Met	Asp	Met	Lys	Met	Val	Phe	Val	Ser	Ile	Leu	Asp	Lys
785					790					795					800
Thr	Asn	Gln	Lys	Glu	Arg	Phe	Met	Ser	Val	Gly	Asp	Ile	Ala	Leu	Leu
				805					810					815	
Ala	Val	Trp	Cys	Lys	Arg	Asn	Val	Leu	Lys	Lys	Asp	Trp	Asn	Glu	Tyr
			820					825					830		
Ala	Ile	Ala	Lys	Gly	Asn	Tyr	Glu	Trp	Leu	Gly	Ala	Lys	Met	Cys	Asn
		835					840					845			
His	Leu	Leu	Leu	Ala	Asp	Leu	Val	Asn	Phe	Gly	Ile	Leu	Gly	Asp	Leu
	850					855					860				
Lys	Ile	Thr	Asn	Lys	Leu	Asp	Thr	Asn	Thr	Asp	Thr	Phe	His	Arg	Asp
865					870					875					880
Ser	Asp	Arg	Leu	Pro	Ser	Val	Ala	Asp	Gln	Lys	Lys	Phe	Ile	Lys	Asn
				885					890					895	
Thr	Ser	Leu	Ser	Asp	Arg	Lys	Gln	Leu	Ala	Leu	Val	His	Ser	Cys	Val
			900					905					910		
Asn	Val	Ser	Thr	Arg	Thr	His	Val	Gly	Arg	Val	Thr	Ala	Thr	Ser	Trp
		915					920						925		
Ala	Val	Asp	Ala	Leu	Arg	Thr	Tyr	Thr	Arg	Gly	Asp	Lys	Asp	Met	Phe
	930					935					940				
Ala	Ala	Leu	Ser	Ser	Ser	Leu	Asp	Met	Tyr	His	Leu	Gly	His	Thr	Asn
945					950					955					960
Ser	Ala	Asn	Phe	Val	Pro	Tyr	Phe	Ser	Arg	Asn	Tyr	Leu	Cys	Asn	Glu
				965					970					975	
Gln	Glu	Asn	Gly	Leu	Trp	Gly	Tyr	Thr	Arg	Arg	Thr	Ser	Glu	Lys	Leu
			980					985					990		
Ala	Lys	Glu	Glu	Leu	Gly	Arg	Gly	Arg	Leu	Gly	Gln	Lys	Val	Gly	Val
		995					1000						1005		
Ala	Lys	Thr	Glu	Leu	Ala	Ala	Ala	Ile	Ala	Ile	Ser	Ser	Ala	Leu	
	1010					1015					1020				
Asp	Met	Gly	Glu	Val	Glu	Ala	Val	Met	Asp	Asp	Ser	Ser	Lys	Val	Arg
1025					1030					1035					1040
Lys	Ile	Ala	Ser	Thr	Cys	Leu	Asn	Val	Asn	Ala	Ala	Lys	Val	Ser	Ala
				1045					1050					1055	
Ala	Arg	Glu	Lys	Ala	Arg	Glu	Ala	Ser	Ile	Lys	Arg	Leu	Leu	Leu	Ala
			1060					1065					1070		
Thr	Asn	Ala	Pro	Ala	Ala	Gly	Ser	Ser	Arg	Asn	Ser	Asn	Arg	Phe	Leu
		1075					1080						1085		
Leu	Lys	Asp	Leu	Trp	Gly	Phe	Phe	Ser	Asp	Pro	Asp	Lys	Arg	Gln	Lys
	1090					1095					1100				
Leu	Ile	Lys	Gly	Glu	Ala	Val	Ser	Val	Leu	Cys	Pro	Asn	Thr	Gly	Phe

1105		1110		1115		1120
Leu His Ala Ala Val Pro Asp Phe Val Ile Glu Tyr Ser Phe Glu Ser						
	1125		1130		1135	
Glu Thr Ser Ile Val Arg Leu Arg Leu Arg Leu Ile Lys Pro Glu Lys						
	1140		1145		1150	
Gln Asp Glu Met Val Cys Pro Ser Thr Ala Pro Glu Ala Asn Lys Lys						
	1155		1160		1165	
Arg Lys Leu Val Arg Asn Asn Gln Asp Ala Val Leu Thr Leu Asp Asp						
	1170		1175		1180	
Glu Asp Asn Ile Val Lys Tyr Asn Lys Tyr Asp Met Val Glu Asp Glu						
	1185		1190		1195	1200
Glu Ala Arg Glu Arg Leu Arg His Gln Asp Lys Gln Ser Val Ile Ala						
	1205		1210		1215	
Ala Arg Ile Ser Lys Val Cys Glu Arg Lys Asn Pro Lys Lys Arg						
	1220		1225		1230	
Arg Leu Glu Asp Pro Glu Leu Gln Ser Val Asp Glu Gln Leu Ile Arg						
	1235		1240		1245	
Glu Leu Ala Ala Ile Ala Tyr						
	1250		1255			

<210> 106  
 <211> 1824  
 <212> DNA  
 <213> SHRIMP

<400> 106

atgagagacg	atacttttaa	ccaagaaact	gcggtgaaac	ttgtacgatg	gtatacagag	60
tacgattggt	gttgccatt	ggttaaccgc	gtggagcgcc	ttctaggatc	gttcggagga	120
ggcgtggacg	ccacgtctgt	gcgaagccga	ccggctcttt	atgaagaaga	taagaaggga	180
gataaatgca	taccctttag	gataacgtcc	cttattgagg	gtatactttt	ggaaaggggt	240
ctaactaaac	ccgattttag	tgctgcagct	tttgatgtat	cagaaaagct	ggtgtattgt	300
agttgtaata	acactcaagg	caattttgat	gtctcttcaa	tgaccatatt	gattgatggc	360
aataatagta	aaaagtatga	agttacatgc	ccgtcatgca	ctgtcgagaa	aattagtggg	420
ggtgccgaat	ctattcacaa	gaaacccatg	tctcttcttg	ccttctttta	caatctggta	480
gagaaagaag	ccttcgccga	aagaattgaa	ctcaagaaat	tgtacctctc	cttactaacg	540
ggctcggcag	ccggaggagg	aggatatgtc	aaggacagct	cccaacaatc	ttccttcaac	600
ggctcttgga	cgctcgttgt	gttccacaca	tctaaaaagg	acaagactcg	tttagaggct	660
gaagttttag	tcagtaacaa	gataaaacac	acatcaagat	tgacagcctg	gtgcgtctgt	720
tccgatctgt	tatatgccct	atgctccacc	actaacaact	ctgcatctta	cgcgtacaag	780
gcaagaaaatt	tgtgtgttat	tgaagggtgg	gaatttttat	attttaaata	cacaatcttt	840
gaagagaatg	gacctttcga	ctccaaaaca	gaccttcaat	cattagttaa	taacgagcct	900
gtttctgaga	caaattcatc	ggcactggcc	gcttcttctt	cctcttttaga	agacgacgat	960
gattgttgtg	atgatgatga	cgatgatgat	gatgatgaag	acgaaaaaac	taagaagaaa	1020
caacccaaga	aacaaaccaa	gaaacaaaaa	acaacaacat	caacacttcc	acctatcagc	1080
aaaaccaatc	acgacaacat	gttgatgaat	gtacttaaaa	aaggagctgt	taatggaaaa	1140
cggaaaatga	tggattcttt	gtcaggaaaa	aaggggccaac	actctaaaaa	attgaaaacc	1200
tccgctgctg	ctgggtggtg	tgcttcatcc	gacgttgttg	caggagaaaa	tgaggaagag	1260
aacaacccct	cttcagttag	tcctactaac	aatagggata	gaaaagacta	tgtgcttcca	1320
tgccctcaaa	tgtaagaagt	cactattttt	tcacaacaca	ggatgaacaa	taacaagtgt	1380
gcagaaagtg	tagtcaaaca	ttctgttgtt	attaatggaa	attgttttaa	cttggttgtt	1440
actcaacaca	gaaaaaagta	tatcctgcct	cacgaaaata	ttcttttttg	cccaccttta	1500
gtccagcatg	taggatttaa	caaatttcgc	attttgactg	gcgtttcttg	cttttttgat	1560
agaattgaaa	ttgttttttc	cgaccaatct	gactctgtgg	tgttgagtaa	taatgctgcc	1620
cattcggcta	ttctaaggct	attgtcatat	ataagagaaa	actcattgaa	gcgaagtgtg	1680
aggactgctt	cggtgaaagg	aatcgatttt	gtcgtgaaat	cacaggacac	taatataggc	1740
atacctttta	gcaacaagga	aataagagaa	cggcaattat	gctcagcttc	aacctgagat	1800
atgctagctg	gtttgggaaa	atga				1824

<210> 107  
 <211> 603

<212> PRT  
<213> SHRIMP

<400> 107

Met	Arg	Asp	Asp	Thr	Phe	Asn	Gln	Glu	Thr	Ala	Val	Lys	Leu	Val	Arg
1				5					10					15	
Trp	Tyr	Thr	Glu	Tyr	Asp	Cys	Cys	Cys	Pro	Leu	Val	Asn	Arg	Val	Glu
			20					25					30		
Arg	Leu	Leu	Gly	Ser	Phe	Gly	Gly	Gly	Val	Asp	Ala	Thr	Ser	Val	Arg
		35					40					45			
Ser	Arg	Pro	Ala	Leu	Tyr	Glu	Glu	Asp	Lys	Lys	Gly	Asp	Lys	Cys	Ile
	50					55					60				
Pro	Phe	Arg	Ile	Thr	Ser	Leu	Ile	Glu	Gly	Ile	Leu	Leu	Glu	Arg	Ala
65					70					75					80
Leu	Thr	Lys	Pro	Asp	Leu	Ala	Ala	Ala	Ala	Phe	Asp	Val	Ser	Glu	Lys
				85					90					95	
Leu	Val	Tyr	Cys	Ser	Cys	Asn	Asn	Thr	Gln	Gly	Asn	Phe	Asp	Val	Ser
			100					105					110		
Ser	Met	Thr	Ile	Trp	Ile	Asp	Gly	Asn	Asn	Ser	Lys	Lys	Tyr	Glu	Val
	115						120					125			
Thr	Cys	Pro	Ser	Cys	Thr	Val	Glu	Lys	Ile	Ser	Gly	Gly	Ala	Glu	Ser
	130					135					140				
Ile	His	Lys	Lys	Pro	Met	Ser	Leu	Leu	Ala	Phe	Phe	Asn	Asn	Leu	Val
145					150					155					160
Glu	Lys	Glu	Ala	Phe	Ala	Glu	Arg	Ile	Glu	Leu	Lys	Lys	Leu	Tyr	Leu
				165					170					175	
Ser	Leu	Leu	Thr	Gly	Ser	Ala	Ala	Gly	Gly	Gly	Gly	Met	Tyr	Lys	Asp
			180					185					190		
Ser	Ser	Gln	Ser	Ser	Phe	Asn	Gly	Ser	Trp	Thr	Ser	Leu	Leu	Phe	
	195					200					205				
His	Thr	Ser	Lys	Lys	Asp	Lys	Thr	Arg	Leu	Glu	Ala	Glu	Val	Leu	Val
	210					215					220				
Ser	Asn	Lys	Ile	Lys	His	Thr	Ser	Arg	Leu	Gln	Pro	Arg	Cys	Val	Cys
225					230					235					240
Ser	Asp	Leu	Leu	Tyr	Ala	Leu	Cys	Ser	Thr	Thr	Asn	Asn	Ser	Ala	Ser
				245					250					255	
Tyr	Ala	Tyr	Lys	Ala	Arg	Asn	Leu	Cys	Val	Ile	Glu	Gly	Gly	Glu	Phe
			260					265					270		
Leu	Tyr	Phe	Lys	Tyr	Thr	Ile	Phe	Glu	Glu	Asn	Gly	Pro	Phe	Asp	Ser
		275					280					285			
Lys	Thr	Asp	Leu	Gln	Ser	Leu	Val	Asn	Asn	Glu	Pro	Val	Ser	Glu	Thr
	290					295					300				
Asn	Ser	Ser	Ala	Ala	Ser	Ser	Ser	Ser	Leu	Glu	Asp	Asp	Asp	Asp	Cys
305					310					315					320
Cys	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Asp	Glu	Asp	Glu	Lys	Thr	Lys
				325						330				335	
Lys	Lys	Gln	Pro	Lys	Lys	Gln	Thr	Lys	Lys	Gln	Lys	Thr	Thr	Thr	Ser
			340					345					350		
Thr	Leu	Pro	Pro	Ile	Ser	Lys	Thr	Asn	His	Asp	Asn	Met	Leu	Met	Asn
		355					360					365			
Val	Leu	Lys	Lys	Gly	Ala	Val	Asn	Gly	Lys	Arg	Lys	Met	Met	Asp	Ser
	370					375					380				
Leu	Ser	Gly	Lys	Lys	Gly	Gln	His	Ser	Lys	Lys	Leu	Lys	Thr	Ser	Ala
385					390					395					400
Ala	Ala	Gly	Gly	Gly	Ala	Ser	Ser	Asp	Val	Val	Ala	Gly	Glu	Asn	Glu
				405					410					415	
Glu	Glu	Asn	Asn	Pro	Ser	Ser	Val	Ser	Pro	Thr	Asn	Asn	Arg	Asp	Arg
			420					425					430		
Lys	Asp	Tyr	Val	Leu	Pro	Cys	Pro	Gln	Ile	Glu	Glu	Val	Thr	Ile	Phe
		435					440					445			
Ser	Gln	His	Arg	Met	Asn	Asn	Asn	Lys	Leu	Ala	Glu	Ser	Val	Val	Lys

450		455		460	
His Ser Val Val Ile Asn Gly Asn Cys Leu Asn Leu Phe Val Thr Gln					
465		470		475	480
His Arg Lys Lys Tyr Ile Leu Phe Asn Ile Leu Phe Cys Pro Pro Leu					
	485		490		495
Val Gln His Val Gly Phe Asn Lys Phe Arg Ile Leu Thr Gly Val Ser					
	500		505		510
Cys Phe Phe Asp Arg Ile Glu Ile Val Phe Ser Asp Gln Ser Asp Ser					
	515		520		525
Val Val Leu Ser Asn Asn Ala Ala His Ser Ala Ile Leu Arg Leu Leu					
	530		535		540
Ser Tyr Ile Arg Glu Asn Ser Leu Lys Arg Ser Val Arg Thr Ala Ser					
	545		550		555
Val Lys Gly Ile Asp Phe Val Val Lys Ser Gln Asp Thr Asn Ile Gly					
	565		570		575
Ile Pro Leu Ser Asn Lys Glu Ile Arg Glu Arg Gln Leu Cys Ser Ala					
	580		585		590
Ser Thr Leu Ser Met Leu Ala Gly Leu Gly Lys					
	595		600		

<210> 108  
 <211> 2403  
 <212> DNA  
 <213> SHRIMP

<400> 108

atgctcagct	tcaaccctga	gtatgctagc	tggtttggga	aaatgatcac	cgacccgggg	60
gtcattttac	ccgtttccaa	ggatgtttgta	ctctttggat	cacgaggaca	atcagatgtg	120
ggaataatga	cactggaccc	tcacgatttg	gatataaaaa	tcacatctaa	acgcataggt	180
gtggaagaaa	gactagctca	atacaatact	ctacctatgg	attttacacg	ggcaatggaa	240
aaggaactaa	ataatagtag	aaatatgaaa	gagtcaatat	tcacgggaat	attttttagac	300
accggttcgg	caatcttcga	agacaacatg	ttcaacggag	gaggttcagc	tttgcgctta	360
attagatccc	ccgctttgaa	ttctgctgta	ttttcaagca	agaactacat	catcaaacaa	420
ttgcccacca	taaccaaadc	tctaaggaga	agtcaagcta	gagataagca	agtggataaa	480
acaagagaga	agatagtgg	ggattctttc	agcatactta	gtgctatagc	tgctcaagta	540
atgcacctca	cagacggaga	gatgacgtac	gtccccgatg	ggcactgcgt	taatgttgc	600
atgtcagaga	ccaatgcttc	gtccatctac	ttgatcataa	acgaccccac	tggttcggga	660
tggaataatta	tgcctaacaa	tttcaataaa	acacttgaaa	tgagagacgg	tgtaatagat	720
agagtagaaa	cattagtgg	gtttgcgtgc	aagtgcgtcg	catcatcctt	gattaaaagg	780
ggcatggatt	tagtggatat	gcaaagaact	ataaggtcta	tggtttcct	ccctccagct	840
tcttctactt	ccaataatac	tcctagagta	gcgataatga	catctggaag	tagtactact	900
acgggcattg	gatccttgct	cattcttgca	gaagatggat	caacacacca	ccaaatcaag	960
ctatcggaat	ataggactgg	attatccatt	actgaaaata	atagagaggt	gtcttttagc	1020
gtagaacctt	caatagacgg	cgttcaagca	gagcatcctc	tatccccttc	tattcttcag	1080
tggttacctc	ctctagttaa	aaggccagaa	gtggtagcag	cagcagcagc	agcagtagta	1140
gaagaagaaa	acggggacaa	taaaccttct	gataaagata	acgaagacaa	gtacagtgat	1200
actgattttt	ggtctaattg	ccccgtcaca	cctctaatta	cacccaagaa	atggagagcg	1260
tgcaaaatga	acgatcgggc	aatgattagt	agttgaaaaa	ataatctagt	gaaactccac	1320
aaatatgatt	ggacaaataa	aactacaaag	gttgattatt	ttgataagat	ggctgccttt	1380
gttgccctca	tgacctttag	aaaattccaa	gacatactag	cggataacta	tgttcctcct	1440
caaacccttt	ctcaggggaag	tgaatacgca	gtgaccatgt	ctaacgtggc	tacactcttt	1500
actgacgtgt	acggttttga	atcgaaatga	aataagccat	tgtttgccct	agaacagcta	1560
gaaaatgaaa	ccgggattga	aagcatatac	gtcctaaata	tcataggaaa	ttcccctgat	1620
ggttaattctg	tcagggtcgt	cagactggaa	aaggaaatga	gtttcctctt	gaaggcgaag	1680
cagtacttta	cagaaatggc	catacctcct	attaatgaaa	aatgcaaatg	gacagataag	1740
gccccgtcat	ctgtaaagga	gtacaagtat	ttttgtgatc	taacagcacc	catttcaaag	1800
agacctagaa	aagataacaa	cgacggcggt	gtggagcatt	ctgcgttgac	ttatacacct	1860
aggtgcatat	accacactga	acgttggtta	gtccatcttt	actctgagcc	agaaaaata	1920
acagaacacg	tatctttcaa	caaggatttg	aacatattag	aaattggaaa	aaatattacc	1980
aaccaatacc	aaacaaacta	caaaagcata	ttcgaaattg	tgacggttcc	cataattgtc	2040

```

gcctctatgt catcaacaaa aacaatgact gtaaacaact acataatttc aacaccttct 2100
gccacgacca agtttggtca ggatccgcca aaaacagggg aacaacttct ggagttgaa 2160
gaggtcagaa actttaaact caaatctgtt cttgttcctc ctccttattt tagggacaat 2220
aagcgcaaca caactctttg ttcacaaata actgaacaaa attgcccgtc atcttctgaa 2280
ggtgggcgtt tttcatgtcc atcagagtca cttattctca agtactctaa tctctctaaa 2340
aagcgcgcac tggaagaaat tgccccagag actgagacta gcattttgtc actagccatg 2400
taa                                     2403

```

<210> 109  
 <211> 794  
 <212> PRT  
 <213> SHRIMP

<400> 109

```

Met Leu Ser Phe Asn Pro Glu Tyr Ala Ser Trp Phe Gly Lys Met Ile
 1          5          10          15
Thr Asp Pro Gly Val Ile Leu Pro Val Ser Lys Asp Val Val Leu Phe
 20          25          30
Gly Ser Arg Gly Gln Ser Asp Val Gly Ile Met Thr Leu Asp Pro His
 35          40          45
Asp Leu Asp Ile Lys Ile Thr Ser Lys Arg Ile Gly Val Glu Glu Arg
 50          55          60
Leu Ala Gln Tyr Asn Thr Leu Pro Met Asp Phe Thr Arg Ala Met Glu
 65          70          75          80
Lys Glu Leu Asn Asn Ser Arg Asn Met Lys Glu Ser Ile Phe Thr Gly
 85          90          95
Ile Phe Leu Asp Thr Gly Ser Ala Ile Phe Glu Asp Asn Met Phe Asn
100          105          110
Gly Gly Gly Ser Ala Leu Arg Leu Ile Arg Ser Pro Ala Leu Asn Ser
115          120          125
Ala Val Phe Ser Ser Lys Asn Tyr Ile Ile Lys Gln Leu Pro Thr Ile
130          135          140
Thr Lys Ser Leu Arg Arg Ser Gln Ala Arg Asp Lys Gln Val Asp Lys
145          150          155          160
Thr Arg Glu Lys Ile Val Val Asp Ser Phe Ser Ile Leu Ser Ala Ile
165          170          175
Ala Ala Gln Val Met His Leu Thr Asp Gly Glu Met Thr Tyr Val Pro
180          185          190
Asp Gly His Cys Val Asn Val Val Met Ser Glu Thr Asn Ala Ser Ser
195          200          205
Ile Tyr Leu Ile Ile Asn Asp Pro Thr Gly Ser Gly Trp Lys Ile Met
210          215          220
Pro Asn Asn Phe Asn Lys Thr Leu Glu Met Arg Asp Gly Val Ile Asp
225          230          235          240
Arg Val Glu Thr Leu Val Glu Phe Ala Cys Lys Cys Val Ala Ser Ser
245          250          255
Leu Ile Lys Arg Gly Met Asp Leu Val Asp Met Gln Arg Thr Ile Arg
260          265          270
Ser Met Asp Phe Leu Pro Pro Ala Ser Ser Thr Ser Asn Asn Thr Pro
275          280          285
Arg Val Ala Ile Met Thr Ser Gly Ser Ser Thr Thr Thr Gly Ile Gly
290          295          300
Ser Leu Ser Ile Leu Ala Glu Asp Gly Ser Thr His His Gln Ile Lys
305          310          315          320
Leu Ser Glu Tyr Arg Thr Gly Leu Ser Ile Thr Glu Asn Asn Arg Glu
325          330          335
Val Ser Phe Thr Val Glu Pro Ser Ile Asp Gly Val Gln Ala Glu His
340          345          350
Pro Leu Ser Pro Ser Ile Leu Gln Trp Leu Pro Pro Leu Val Lys Arg
355          360          365
Pro Glu Val Val Ala Ala Ala Ala Ala Val Val Glu Glu Glu Asn

```

370						375						380					
Gly	Asp	Asn	Lys	Pro	Ser	Asp	Lys	Asp	Asn	Glu	Asp	Lys	Tyr	Ser	Asp		
385						390				395					400		
Thr	Asp	Phe	Trp	Ser	Asn	Val	Pro	Val	Thr	Pro	Leu	Ile	Thr	Pro	Lys		
				405					410					415			
Lys	Trp	Arg	Ala	Cys	Lys	Ile	Asn	Asp	Arg	Ala	Met	Ile	Ser	Ser	Trp		
			420					425					430				
Lys	Asn	Asn	Leu	Val	Lys	Leu	His	Lys	Tyr	Asp	Trp	Thr	Asn	Lys	Thr		
		435				440						445					
Thr	Lys	Val	Asp	Tyr	Phe	Asp	Lys	Met	Ala	Ala	Phe	Val	Met	Thr	Phe		
450						455					460						
Arg	Lys	Phe	Gln	Asp	Ile	Leu	Ala	Asp	Asn	Tyr	Val	Pro	Pro	Gln	Thr		
465					470					475					480		
Pro	Ser	Gln	Gly	Ser	Glu	Tyr	Ala	Val	Thr	Met	Ser	Asn	Val	Ala	Thr		
				485					490					495			
Leu	Phe	Thr	Asp	Val	Tyr	Gly	Phe	Glu	Ser	Asn	Gly	Asn	Lys	Pro	Leu		
			500					505					510				
Phe	Ala	Leu	Glu	Gln	Leu	Glu	Asn	Glu	Thr	Gly	Ile	Glu	Ser	Ile	Tyr		
		515					520					525					
Val	Leu	Asn	Ile	Ile	Gly	Asn	Ser	Pro	Asp	Gly	Asn	Ser	Val	Arg	Val		
530					535					540							
Val	Arg	Leu	Glu	Lys	Glu	Met	Ser	Phe	Leu	Leu	Lys	Ala	Lys	Gln	Tyr		
545					550				555						560		
Phe	Thr	Glu	Met	Ala	Ile	Pro	Pro	Ile	Asn	Glu	Lys	Cys	Lys	Trp	Thr		
				565					570					575			
Asp	Lys	Ala	Pro	Ser	Ser	Val	Lys	Glu	Tyr	Lys	Tyr	Phe	Cys	Asp	Leu		
			580					585					590				
Thr	Ala	Pro	Ile	Ser	Lys	Arg	Pro	Arg	Lys	Asp	Asn	Asn	Asp	Gly	Gly		
		595					600						605				
Val	Glu	His	Ser	Ala	Leu	Thr	Tyr	Thr	Pro	Arg	Cys	Ile	Tyr	His	Thr		
	610					615					620						
Glu	Arg	Cys	Leu	Val	His	Lys	Glu	Pro	Glu	Lys	Ile	Thr	Glu	His	Val		
625					630				635						640		
Ser	Phe	Asn	Lys	Asp	Leu	Asn	Ile	Ile	Gly	Lys	Asn	Ile	Thr	Asn	Gln		
				645					650					655			
Tyr	Gln	Thr	Asn	Tyr	Lys	Ser	Ile	Phe	Glu	Ile	Val	Asp	Val	Pro	Ile		
			660					665					670				
Ile	Val	Ala	Ser	Met	Ser	Ser	Thr	Lys	Thr	Met	Thr	Val	Asn	Asn	Tyr		
		675					680					685					
Ile	Ile	Ser	Thr	Pro	Ser	Ala	Thr	Thr	Lys	Phe	Val	Gln	Asp	Pro	Pro		
	690					695					700						
Lys	Thr	Gly	Lys	Gln	Leu	Ala	Val	Glu	Glu	Val	Arg	Asn	Phe	Lys			
705					710				715					720			
Leu	Lys	Ser	Val	Leu	Val	Pro	Pro	Pro	Tyr	Phe	Arg	Asp	Asn	Lys	Arg		
			725						730					735			
Asn	Thr	Thr	Leu	Cys	Ser	Gln	Ile	Thr	Glu	Gln	Asn	Cys	Pro	Ser	Ser		
			740					745					750				
Ser	Glu	Gly	Gly	Arg	Phe	Ser	Cys	Pro	Ser	Glu	Ser	Leu	Ile	Leu	Lys		
		755					760					765					
Tyr	Ser	Asn	Leu	Ser	Lys	Lys	Arg	Ala	Leu	Glu	Glu	Ile	Ala	Pro	Glu		
	770					775					780						
Thr	Glu	Thr	Ser	Ile	Leu	Ser	Leu	Ala	Met								
785					790												

<210> 110  
 <211> 1581  
 <212> DNA  
 <213> SHRIMP

<400> 110

```

atgggagtagc agaagaatat cctggtcggt ggtgggtggtg gtgtatcatt gttattgggt 60
gttgttacac ttctaggaac agtaacagaa ggagcaccgg cagtcccacc tttttcatcg 120
tcttcctatt cctttactcc tgaatcgagt gttttctggg tcgaaggaaa tcgtgtttta 180
agtggaacca agaaggacac cttaatcaac gttctgggga agaagattcc ttattatgct 240
aattccatat tcagacatga ctgttctgaa actcgttcta ttcaatggcc agaaacttcc 300
cctttgggct tgaaccttat tttctgttca tgtgcgagtc atgaacatca acaccgtact 360
catgaaacaa cagaacctga cgatttattg tgggacggat caagaaaaac taccaccata 420
attctaccta aaaaatggtg gtctgatggt gtgtggacat ctttatggag ggataacgac 480
cagaagtgtg ggtgcgggca ggcatttgtt tcttccttta cttctacgca gaaagaagtc 540
caaggggaat ggcttgctgc tcacactaac ggaaagacat ctgagggtga tactaattca 600
gcctaccttt tcataagcct tcaacgaact acactcaagc ctatcatcac tgacgtcaca 660
gaagataata tgatgatggg aagaatgtca ggcacaccca tgaaccctaa ggatatgaca 720
tattttgtca acgatttttc agacgatata ggaagtactc ctcagtgtct tgtatcgaat 780
tcggacatcc tgaacaagag ggaagaatgg atagctgttt ggggtgttgc agactctaaa 840
gacctcctaa ctaaacatca actgggggag cgggaaatag ggagcgaagg aagaagaaga 900
aatcccgggtg ttgaggagga agaagaagag agagtggaag aagaagaaga agtagaagtt 960
gcgctacctt acattaagaa aagtggaaaa cttatcggac ctcgtagaag acctttgaca 1020
acaacaacaa ccactactac tactactact actaatccta ttgttagaga ggttgtggaa 1080
gattttgatt acgagtcctt taatgaacca gaaatccttg gcagtaactc aaaacttccc 1140
ttcattagat ttcttgatca aaaaaattgg agacttggtg tcatgagcag agtttcttct 1200
tccatcgcca actttaaaat tgaacaagag tcatcaaaag ccttattttg tttggcagtc 1260
tggttggggg atgaacatac ccctaaattc agacttagtg tatggaagaa ctggaagcct 1320
tttacttctg cacctattat tgtccagaat gtaggttatt cctctgatgt tttctggcat 1380
gaaactctta gaagcaaaat tgttgatcgg tcaagggacc tgatagaaac aaaagtgaca 1440
aagaaaattg ggaagattg ggctaataaa aaacaaactg tagttgctat gtttatttca 1500
ggtattgttt gtataacagt aacagttatt tctatatatt caattgtaat atattacaaa 1560
ataaaaatgc ctaaattcta a

```

<210> 111  
 <211> 522  
 <212> PRT  
 <213> SHRIMP

```

<400> 111
Met Gly Val Gln Lys Asn Ile Leu Val Gly Gly Gly Gly Gly Val Ser
  1          5          10          15
Leu Leu Leu Gly Val Val Thr Leu Leu Gly Thr Val Thr Glu Gly Ala
  20          25          30
Pro Ala Val Pro Pro Phe Ser Ser Ser Ser Tyr Ser Phe Thr Pro Glu
  35          40          45
Ser Ser Val Phe Trp Val Glu Gly Asn Arg Val Leu Ser Gly Thr Lys
  50          55          60
Lys Asp Thr Leu Ile Asn Val Leu Gly Lys Lys Ile Pro Tyr Tyr Ala
  65          70          75          80
Asn Ser Ile Phe Arg His Asp Cys Ser Glu Thr Arg Ser Ile Gln Trp
  85          90          95
Pro Glu Thr Ser Pro Leu Gln Leu Ile Phe Cys Ser Cys Ala Ser His
 100          105          110
Glu His Gln His Arg Thr His Glu Thr Thr Glu Pro Asp Asp Leu Leu
 115          120          125
Trp Asp Gly Ser Arg Lys Thr Thr Thr Ile Ile Leu Pro Lys Lys Trp
 130          135          140
Trp Ser Asp Val Val Trp Thr Ser Leu Trp Arg Asp Asn Asp Gln Lys
 145          150          155          160
Cys Gly Cys Gly Gln Ala Phe Val Ser Ser Phe Thr Ser Thr Gln Lys
 165          170          175
Glu Val Gln Gly Glu Trp Leu Ala Ala His Thr Asn Gly Lys Thr Ser
 180          185          190
Glu Gly Asp Thr Asn Ser Ala Tyr Leu Phe Ile Ser Leu Gln Arg Thr
 195          200          205
Thr Leu Lys Pro Ile Ile Thr Asp Val Thr Glu Asp Asn Met Met Met

```

210						215						220				
Gly	Arg	Met	Ser	Gly	Thr	Pro	Met	Asn	Pro	Lys	Asp	Met	Thr	Tyr	Phe	
225					230					235					240	
Val	Asn	Asp	Phe	Ser	Asp	Asp	Ile	Gly	Ser	Thr	Pro	Gln	Cys	Leu	Val	
				245					250					255		
Ser	Asn	Ser	Asp	Ile	Leu	Asn	Lys	Arg	Glu	Glu	Trp	Ile	Ala	Val	Trp	
			260					265					270			
Gly	Val	Ala	Asp	Ser	Lys	Asp	Leu	Thr	Lys	His	Gln	Leu	Gly	Glu		
		275					280				285					
Arg	Glu	Tyr	Gly	Ser	Glu	Gly	Arg	Arg	Arg	Asn	Pro	Gly	Val	Glu	Glu	
	290					295					300					
Glu	Glu	Glu	Glu	Arg	Val	Glu	Glu	Glu	Glu	Glu	Val	Glu	Val	Pro	Tyr	
305					310					315					320	
Ile	Lys	Lys	Ser	Gly	Lys	Leu	Ile	Gly	Pro	Arg	Arg	Arg	Pro	Leu	Thr	
				325					330					335		
Thr	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Asn	Pro	Ile	Val	Arg	
			340					345					350			
Glu	Val	Val	Glu	Asp	Phe	Asp	Tyr	Glu	Ser	Phe	Asn	Glu	Pro	Glu	Ile	
		355					360					365				
Phe	Gly	Ser	Asn	Ser	Lys	Leu	Pro	Phe	Ile	Arg	Phe	Leu	Asp	Gln	Lys	
	370					375					380					
Asn	Trp	Arg	Leu	Gly	Ile	Met	Ser	Arg	Val	Ser	Ser	Ser	Ile	Ala	Asn	
385					390					395					400	
Phe	Lys	Ile	Glu	Gln	Glu	Ser	Ser	Lys	Ala	Leu	Phe	Cys	Leu	Ala	Val	
				405					410					415		
Trp	Val	Gly	Asp	Glu	His	Thr	Pro	Lys	Phe	Arg	Leu	Ser	Val	Trp	Lys	
		420						425					430			
Asn	Trp	Lys	Pro	Phe	Thr	Ser	Ala	Pro	Ile	Ile	Val	Gln	Asn	Val	Gly	
		435					440					445				
Tyr	Ser	Ser	Asp	Val	Phe	Trp	His	Glu	Thr	Leu	Arg	Ser	Lys	Ile	Val	
	450					455					460					
Asp	Arg	Ser	Arg	Asp	Leu	Ile	Glu	Thr	Lys	Val	Thr	Lys	Lys	Ile	Gly	
465					470					475					480	
Glu	Asp	Trp	Ala	Asn	Lys	Lys	Gln	Thr	Val	Val	Ala	Met	Phe	Ile	Ser	
				485					490					495		
Gly	Ile	Val	Cys	Ile	Thr	Val	Thr	Val	Ile	Ser	Ile	Phe	Ser	Ile	Val	
			500					505					510			
Ile	Tyr	Tyr	Lys	Ile	Lys	Met	Pro	Lys	Phe							
	515						520									

&lt;210&gt; 112

&lt;211&gt; 627

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 112

```

atgtatatct tcgtcgaagg ttcccccttc acagggaaga gttcatggat gtccaagttg 60
atagatacag gatcatgttg aatgtctttc ctcaattttc ttcgtatgaa cacttctgac 120
tactacaact ggcctgccga aatcgggaca gaacatctcc agttaggttt cagagaaacc 180
agagtgggtg atggaatggt tgaacctgtc ctaaagacct ttgtcgactc gtggaagaaa 240
gagcaaggaa aagagagttt gaaggaatat ctggactaca acggccaagt catggagatc 300
tacatcgtag aatggttgag acaaaggcca ctagccttcc acgtgtttac ctatacagat 360
gaagctgtca agagtggatt cttgaacgag gaggatctag atatggatac tgcaaccaag 420
tggtatggctg aaattattag agagaagagg ggcaatatc aagaaataaa agtgaccctt 480
agagtgtct tcaatggcaa tgtttgtagt gcatgtttct ctaacactaa gagaaacttg 540
tataactttg gaacaaacta taacaatgtt gtacattgtg atttgttgtg cccttttgca 600
aggcatagga ttgtacattt cttataaa

```

&lt;210&gt; 113

&lt;211&gt; 208



<212> PRT  
<213> SHRIMP

<400> 113

Met	Tyr	Ile	Phe	Val	Glu	Gly	Ser	Pro	Leu	Thr	Gly	Lys	Ser	Ser	Trp
1				5					10					15	
Met	Ser	Lys	Leu	Ile	Asp	Thr	Gly	Ser	Cys	Gly	Met	Ser	Phe	Leu	Asn
			20					25					30		
Phe	Leu	Arg	Met	Asn	Thr	Ser	Asp	Tyr	Tyr	Asn	Trp	Pro	Ala	Glu	Ile
		35					40					45			
Gly	Thr	Glu	His	Leu	Gln	Leu	Gly	Phe	Arg	Glu	Thr	Arg	Val	Val	Asp
	50				55					60					
Gly	Met	Phe	Glu	Pro	Val	Leu	Lys	Thr	Phe	Val	Asp	Ser	Trp	Lys	Lys
65					70					75					80
Glu	Gln	Gly	Lys	Glu	Ser	Leu	Lys	Glu	Tyr	Leu	Asp	Tyr	Asn	Gly	Gln
				85					90					95	
Val	Met	Glu	Ile	Tyr	Ile	Ala	Glu	Trp	Leu	Arg	Gln	Arg	Pro	Leu	Ala
			100					105					110		
Phe	His	Val	Phe	Thr	Tyr	Thr	Asp	Glu	Ala	Val	Lys	Ser	Gly	Phe	Leu
		115					120					125			
Asn	Glu	Glu	Asp	Leu	Asp	Met	Asp	Thr	Ala	Thr	Lys	Trp	Met	Ala	Glu
	130				135						140				
Ile	Ile	Arg	Glu	Lys	Arg	Gly	Asn	Ile	Gln	Glu	Ile	Lys	Val	Thr	Pro
145					150					155					160
Arg	Val	Val	Phe	Asn	Gly	Asn	Val	Cys	Ser	Ala	Cys	Phe	Ser	Asn	Thr
			165						170					175	
Lys	Arg	Asn	Leu	Tyr	Asn	Phe	Gly	Thr	Asn	Tyr	Asn	Asn	Val	Val	His
		180						185					190		
Cys	Asp	Leu	Leu	Cys	Pro	Phe	Ala	Arg	His	Arg	Ile	Val	His	Phe	Leu
		195					200					205			

<210> 114  
<211> 375  
<212> DNA  
<213> SHRIMP

<400> 114

atgtggagat	cttgtattag	caacattaga	gaaatggggg	acaataaaga	ttatgaaaca	60
agactgattc	aaagaattaa	tgatttggaa	tcagaaattg	aaaataaaac	tgaattatgt	120
gaaaaaatca	atgagcagat	gaaaaatata	caactaaaat	atgataaatg	tttcgtagag	180
gaggagacgg	aaaaattccg	caagatggag	gaaagagtta	aatacctcaa	agagcaggga	240
atccctctag	accagaaga	aagacgtaca	atgttggctg	aaattgacaa	gagtaacaaa	300
gagttagatg	cccttcttga	ggaaaatgaa	cgtataataa	agctcattga	tgaagagttg	360
gaaagtatga	aataa					375

<210> 115  
<211> 124  
<212> PRT  
<213> SHRIMP

<400> 115

Met	Trp	Arg	Ser	Cys	Ile	Ser	Asn	Ile	Arg	Glu	Met	Gly	Asp	Asn	Lys
1				5					10					15	
Asp	Tyr	Glu	Thr	Arg	Leu	Ile	Gln	Arg	Ile	Asn	Asp	Leu	Glu	Ser	Glu
			20					25					30		
Ile	Glu	Asn	Lys	Thr	Glu	Leu	Cys	Glu	Lys	Ile	Asn	Glu	Gln	Met	Lys
		35					40					45			
Asn	Thr	Gln	Leu	Lys	Tyr	Asp	Lys	Cys	Phe	Val	Glu	Glu	Glu	Thr	Glu
	50				55						60				
Lys	Phe	Arg	Lys	Met	Glu	Glu	Arg	Val	Lys	Tyr	Leu	Lys	Glu	Gln	Gly

WO 01/38351

PCT/US00/28888

198

```

65          70          75          80
Ile Pro Leu Asp Pro Glu Glu Arg Arg Thr Met Leu Ala Glu Ile Asp
      85          90          95
Lys Ser Asn Lys Glu Leu Asp Ala Leu Leu Glu Glu Asn Glu Arg Ile
      100        105        110
Ile Lys Leu Ile Asp Glu Glu Leu Glu Ser Met Lys
      115        120

```

<210> 116  
 <211> 252  
 <212> DNA  
 <213> SHRIMP

```

<400> 116
atgcaaaaaa aatatgataa attatttgaa gatgataaaa ggttccgaga aatagaggaa 60
cgaatccttc aacaaaaaga gaagggaaac cctctagacc cagaagaaag acttgatttg 120
tcggctgata ttgataggag tatgaaagag attgatgatt gtctcgagga aataaacat 180
atagaattat ccattgatac attattggat gaatgtgaaa acttgcatta tggctcttcaa 240
acaactaaat aa                                     252

```

<210> 117  
 <211> 83  
 <212> PRT  
 <213> SHRIMP

```

<400> 117
Met Gln Lys Lys Tyr Asp Lys Leu Phe Glu Asp Asp Lys Arg Phe Arg
  1          5          10          15
Glu Ile Glu Glu Arg Ile Leu Gln Gln Lys Glu Lys Gly Asn Pro Leu
      20          25          30
Asp Pro Glu Glu Arg Leu Val Leu Ser Ala Asp Ile Asp Arg Ser Met
      35          40          45
Lys Glu Ile Asp Asp Cys Leu Glu Glu Ile Asn His Ile Glu Leu Ser
      50          55          60
Ile Asp Thr Leu Leu Asp Glu Cys Glu Asn Leu His Tyr Gly Leu Gln
      65          70          75          80
Thr Thr Lys

```

<210> 118  
 <211> 2253  
 <212> DNA  
 <213> SHRIMP

```

<400> 118
atggaaaaaa agactgagac ggctgcaaca acagaaaaag acccagaacc gtctgtcagt 60
aaaagggtcca gaaataaaga acccaaaaca acttctactg ttacacttc tgtaaagtgt 120
taccttttctt ccataatcaa gagtgaaagt agtagaagta atgtcacctc aaccaaagaa 180
aggtttgagg agagggtgtaa atccgtaagc aagatgatgg tcaaaggttc actgtttttg 240
aggttagtag tggacgagtg tctgagacgt tacaaccatc tagaagacga aatcgataaa 300
tggccagata tgacgaagga taactttttac gtccaattgt tgaggaaggg tttagacaag 360
aagaaattga aagaaggatc tacacatcct gttgtagaag atgtttggaa ttcccccatc 420
gtccaagaaa cattcctatc ccagcaagga gaaggaaata atcccataaa gagacatctc 480
atggatttca ataccatcac ctacgccgcc aaacaactaa aaacttgctt cgaaacaaac 540
ctacgcaccc atttccggac acgacaacag agggccatat ctggatgggt agctgaaaac 600
gggttcgata aaaagtatac gaaactcgta caacactgga taattggatg tacctacaag 660
agtgattggg tggacagtgg tgatttggaagg ggtgtaaaag aaggaacgaa aaatttcgtg 720
actcttcata ggaaacattt atgtgttatt agtgataaga agaattgtac aatttcctat 780
tcacctgaag agaaatatcc gataccctca atactaaatt attacaagtt tctacaaaca 840

```

```

gagtatccac aaaacaagaa aatacagaaa atgatatgtt tcccaaaaca caaactaaag 900
atacactatt gtacgtttga ccaaacgacc attcaaggaa tttgtaaaga tttgggagtg 960
tggaaggata tggaagaacg acacaaacaa tcagaagata tactttacaa gcaaggatgg 1020
tacctattat tcgacgttaa aaagattaag aaattgcgtc caaactggaa ctttctactct 1080
atccagacgg acggcggaagg cgtctctgtg ctatttttcca gagaagtgga agaagtagag 1140
actgtttcca agaaaagtaa gaaaaataaa aaacctagag gagatgagga taggagaaat 1200
taccgcacca ctaatgccaa gtacgtagtg ggtgtagatc cgggaagaac taatgtcgtt 1260
tcctgttcgg tatttgatac ccgtcaaaaa agggtagtga gaaaacacag aatgactgcg 1320
aaacaatact atcaagaatc ttggatgaca gatagaagaa aggcaaacga aacgtacaag 1380
aagaacaata aagagtacaa agaggcgtaa gaggaataaa ctaggtacga taatggcgaa 1440
gaaattataa atgatggtaa cggtgatact tctacacca ctaaaaaatt cgaagcttac 1500
ttgaaggtag tgaacgagca ctacaggtta ctgtggaacg aaaagggaaa gaaaaagtac 1560
aggaaaaatg ccatgaaagt atactctaga aaacaaaagt gcatatctaa ctttatagat 1620
gaattaatcc ctaaaaggga taaaattgaa gattaccaca ttgcttttgg ggatgcgaaa 1680
tttgccgtga cgggaagagg tgagcaatac gcatcacctg ccaggatttt cgccaagaag 1740
ataaaggaaa gagtcggagg tgataagagg tttactttcg tggacgagaa atatacgtca 1800
aaagtatgcc atcgctgcaa tcaaccttta aatatgctgg agaaggattg tttttcaccg 1860
aataagaaaa gaaaaccgcc gacaatagta acaaccacaa caacaacaac aacagaagaa 1920
gacgaagaaa atggaaaatg gaagaaggct acacctctca gagaaaatag agataccaga 1980
agatgctcgt ccgaaaagac gcaattcggt tacagttcaa accgaaaagt atcgacagga 2040
gatatctcta tggaaacgcc agtaccttct tccacttctt cttccttttg tactcctact 2100
tccattacat gtgtcttggg aggaaaattc gtcgacaggg acttcaatgc aagcaccaat 2160
attgttcata aatttctagg gttttgggat aaaaagttaa tggaaaagaa agacaagatg 2220
ccgttgaagt atcactttat tcgagttgcc tga 2253

```

&lt;210&gt; 119

&lt;211&gt; 746

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 119

```

Met Glu Lys Lys Thr Glu Thr Ala Ala Thr Thr Glu Lys Asp Pro Glu
1 5 10 15
Pro Ser Val Ser Lys Arg Ser Arg Asn Lys Glu Pro Lys Thr Thr Ser
20 25 30
Thr Val Tyr Thr Ser Val Lys Cys Tyr Leu Ser Ser Ile Ile Lys Ser
35 40 45
Glu Ser Ser Arg Ser Asn Val Thr Ser Thr Lys Glu Arg Phe Glu Glu
50 55 60
Arg Cys Lys Ser Val Ser Lys Met Met Val Lys Gly Ser Leu Phe Leu
65 70 75 80
Arg Leu Val Val Asp Glu Cys Leu Arg Arg Tyr Asn His Leu Glu Asp
85 90 95
Glu Ile Asp Lys Trp Pro Asp Met Thr Lys Asp Asn Phe Tyr Val Gln
100 105 110
Leu Leu Arg Lys Gly Leu Asp Lys Lys Lys Leu Lys Glu Gly Ser Thr
115 120 125
His Pro Val Val Glu Asp Val Trp Asn Ser Pro Ile Val Gln Glu Thr
130 135 140
Phe Leu Ser Gln Gln Gly Glu Gly Asn Asn Pro Ile Lys Arg His Leu
145 150 155 160
Met Asp Phe Asn Thr Ile Thr Tyr Ala Ala Lys Gln Leu Lys Thr Cys
165 170 175
Phe Glu Thr Asn Leu Arg Thr His Phe Arg Thr Arg Gln Gln Arg Ala
180 185 190
Ile Ser Gly Trp Leu Ala Glu Asn Gly Phe Asp Lys Lys Tyr Thr Lys
195 200 205
Leu Val Gln His Trp Ile Ile Gly Cys Thr Tyr Lys Ser Asp Trp Val
210 215 220
Asp Ser Gly Asp Leu Glu Arg Val Lys Glu Gly Thr Lys Asn Phe Val
225 230 235 240

```

WO 01/38351

200

PCT/US00/28888

Thr	Leu	His	Arg	Lys	His	Leu	Cys	Val	Ile	Ser	Asp	Lys	Lys	Asn	Gly
				245					250					255	
Thr	Ile	Ser	Tyr	Ser	Pro	Glu	Glu	Lys	Tyr	Pro	Ile	Pro	Ser	Ile	Leu
			260					265					270		
Asn	Tyr	Tyr	Lys	Phe	Leu	Gln	Thr	Glu	Tyr	Pro	Gln	Asn	Lys	Lys	Ile
		275					280					285			
Gln	Lys	Met	Ile	Val	Val	Pro	Lys	His	Lys	Leu	Lys	Ile	His	Tyr	Cys
	290					295					300				
Thr	Phe	Asp	Gln	Thr	Thr	Ile	Gln	Gly	Ile	Cys	Lys	Asp	Leu	Gly	Val
305					310					315					320
Trp	Lys	Asp	Met	Glu	Glu	Arg	His	Lys	Gln	Ser	Glu	Asp	Ile	Leu	Tyr
			325						330					335	
Lys	Gln	Gly	Trp	Tyr	Leu	Leu	Phe	Asp	Val	Lys	Lys	Ile	Lys	Lys	Leu
			340					345					350		
Arg	Pro	Asn	Trp	Asn	Phe	His	Ser	Ile	Gln	Thr	Asp	Gly	Glu	Gly	Val
		355					360					365			
Ser	Val	Leu	Phe	Ser	Arg	Glu	Val	Glu	Glu	Val	Glu	Thr	Val	Ser	Lys
	370					375					380				
Lys	Ser	Lys	Lys	Asn	Lys	Pro	Arg	Gly	Asp	Glu	Asp	Arg	Arg	Arg	Asn
385					390				395						400
Tyr	Pro	Pro	Thr	Asn	Ala	Lys	Tyr	Val	Val	Gly	Val	Asp	Pro	Gly	Arg
				405					410					415	
Thr	Asn	Val	Val	Ser	Cys	Ser	Val	Phe	Asp	Thr	Arg	Gln	Lys	Arg	Val
			420					425					430		
Val	Arg	Lys	His	Arg	Met	Thr	Ala	Lys	Gln	Tyr	Tyr	Gln	Glu	Ser	Trp
		435					440					445			
Met	Thr	Asp	Arg	Arg	Lys	Ala	Asn	Glu	Thr	Tyr	Lys	Lys	Asn	Asn	Lys
	450					455					460				
Glu	Tyr	Lys	Glu	Ala	Leu	Glu	Glu	Ile	Thr	Arg	Tyr	Asp	Asn	Gly	Glu
465					470					475					480
Glu	Ile	Ile	Asn	Asp	Gly	Asn	Gly	Asp	Thr	Ser	Thr	Pro	Thr	Lys	Lys
				485					490					495	
Phe	Glu	Ala	Tyr	Leu	Lys	Val	Val	Asn	Glu	His	Tyr	Arg	Leu	Leu	Trp
			500					505					510		
Asn	Glu	Lys	Gly	Lys	Lys	Lys	Tyr	Arg	Lys	Asn	Ala	Met	Lys	Val	Tyr
		515					520					525			
Ser	Arg	Lys	Gln	Lys	Cys	Ile	Ser	Asn	Phe	Ile	Asp	Glu	Leu	Ile	Pro
	530					535					540				
Lys	Arg	Asp	Lys	Ile	Glu	Asp	Tyr	His	Ile	Ala	Phe	Gly	Asp	Ala	Lys
545					550					555					560
Phe	Ala	Cys	Thr	Gly	Arg	Gly	Glu	Gln	Tyr	Asp	Ala	Arg	Ile	Phe	Ala
				565					570					575	
Lys	Lys	Ile	Lys	Glu	Arg	Val	Gly	Gly	Asp	Lys	Arg	Phe	Thr	Phe	Val
			580					585					590		
Asp	Glu	Lys	Tyr	Thr	Ser	Lys	Val	Cys	His	Arg	Cys	Asn	Gln	Pro	Leu
		595					600					605			
Asn	Met	Leu	Glu	Lys	Asp	Cys	Phe	Ser	Pro	Asn	Lys	Lys	Arg	Lys	Pro
	610					615					620				
Pro	Thr	Ile	Val	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Thr	Glu	Glu	Asp	Glu
625					630						635				640
Glu	Asn	Gly	Lys	Trp	Lys	Lys	Ala	Thr	Pro	Leu	Arg	Glu	Asn	Arg	Asp
				645					650					655	
Thr	Arg	Arg	Cys	Ser	Ser	Glu	Lys	Thr	Gln	Phe	Gly	Tyr	Ser	Ser	Asn
			660					665					670		
Arg	Lys	Val	Ser	Thr	Gly	Asp	Ile	Ser	Met	Pro	Val	Pro	Ser	Ser	Thr
		675					680					685			
Ser	Ser	Ser	Phe	Cys	Thr	Pro	Thr	Ser	Ile	Thr	Cys	Val	Leu	Gly	Gly
	690					695					700				
Lys	Phe	Val	Asp	Arg	Asp	Phe	Asn	Ala	Ser	Thr	Asn	Ile	Val	His	Lys
705					710					715					720
Phe	Leu	Gly	Phe	Trp	Asp	Lys	Lys	Leu	Met	Glu	Lys	Lys	Asp	Lys	Met

Pro Leu Lys Tyr His Phe Ile Arg Val Ala  
 725 730 735  
 740 745

<210> 120  
 <211> 411  
 <212> DNA  
 <213> SHRIMP

<400> 120  
 atggggaata gtgaatctcg ttctagtggg attgaaattg tacataaaaa tgggtgcacca 60  
 aaaaggtctc ataaaactct ttacttgtca aatagaactg aaagacatgc ccagatacaa 120  
 aagcagatcg aagagttaca tcacaaaaca aataagcaat ttgaacaggc tcaaaagggtc 180  
 ctcgacaaaa acgaagagcg aaagaagcat cagcaacagc aacaaataat aattcctcta 240  
 gacccagaag aaagacgtgc aatattggct gaaatcgata aacacatgaa agagattgat 300  
 ggtttcatcg aggaaagtga acgtctaggt ttactttag atgcagaaat caataacttg 360  
 gaagaaaagg aggttgaaga ggaacatctt ttgaaacaaa aagaagacta a 411

<210> 121  
 <211> 134  
 <212> PRT  
 <213> SHRIMP

<400> 121  
 Met Gly Asn Ser Glu Ser Arg Ser Ser Gly Ile Glu Ile Val His Lys  
 1 5 10 15  
 Asn Gly Ala Pro Lys Arg Ser His Lys Thr Leu Tyr Leu Ser Asn Arg  
 20 25 30  
 Thr Glu Arg His Ala Gln Ile Gln Lys Gln Ile Glu Glu Leu His His  
 35 40 45  
 Lys Thr Asn Lys Gln Phe Glu Gln Ala Gln Lys Val Leu Asp Lys Asn  
 50 55 60  
 Glu Glu Arg Lys Lys His Gln Gln Gln Gln Gln Ile Ile Ile Pro Leu  
 65 70 75 80  
 Asp Pro Glu Glu Arg Arg Ala Ile Leu Ala Glu Ile Asp Lys His Met  
 85 90 95  
 Lys Glu Ile Asp Gly Phe Ile Glu Glu Ser Leu Gly Leu Leu Val Asp  
 100 105 110  
 Ala Glu Ile Asn Asn Leu Glu Glu Lys Glu Val Glu Glu Glu His Leu  
 115 120 125  
 Leu Lys Gln Lys Glu Asp  
 130

<210> 122  
 <211> 2772  
 <212> DNA  
 <213> SHRIMP

<400> 122  
 atgtcctcct cctcgtcgtc gtcgttctcg ttccgcatct ccacctacca gacctttctc 60  
 aaggctctgg ctacccaga tctggtggac aagattaccc agaatgtga cgagacagga 120  
 agaaaccaga agtgcccat ccagtttctg gccgacatct cgcacctgat ccaaggagaa 180  
 agaaatggag gaaatctgtt ccctttgcac ccgttcaaga accaaccaca tctggaacca 240  
 agaatagtgg gaagtcttca cgggagaaca ttggacaatg acattgaaga atcactagt 300  
 tattttgtca aggatctgta taatggagta ttttcctatg tgaacggcgt caaggagtta 360  
 cagggcgttc tggacaagaa aatatctgga tctggatctg gagaatcctc ctcttctaga 420  
 gctcccctga tccaataaac tgatgtggat ttgctgtaca ttttcggtac tttggtagtt 480  
 cttcccccca gatctaaagc gtaccgagtc atcactgaag ctgttctagc actccccttc 540  
 aatgaattca gtaacaactg gcctcctaca aatatcaaag gagcatacgt gtctagagat 600

```

ttcaggatgt ttaatctggt ggccgggttta gatcatatag aaggagaagt tgggggagaa 660
agtgaatggg aatccataca cgcatctgtc gtcaagcgaa tggtcacccat tatgcgcaac 720
aaagctgaga agaaacctcc atcaacatct agaattttta gagtgatgt ggctgaacca 780
gttaatgatg cagtgcacaa gatccctata cgtgtactca gtaaattatt cggttcaaga 840
ctcgccggta ttctccagaa agtgactctt tattcaatgc taaatcttcc atatctcctg 900
tcttcaaatt ctatagacat caagcaagga gtaaaaggaa ttacattatc tataccatct 960
gcaagaaaat tgggattcta ttactccaa aaggatacaa cattacaatc ttccctatca 1020
caagatgttg ccgactgcat agtttcaatc aacgctggta ttattgggta tgatttctct 1080
gaaaaaatac gacagtgcac tgaggagaaa aacaagccag aaaactgttg tatgtgcttt 1140
tgtgaaattg acaagacgcc cgatttttct tatagtgaac atgtggcaag gcacaatttc 1200
ttccccgtcc acgcattctc ctcatcacat gatgacaagt gttgtggagc aaagatttgt 1260
tccgaatgta tattcccgtc catcatttcc ctgtatgaga aaatgactgg tgtggcagg 1320
gtaaaagtgt tagatttgtt ccagtgcctt ggttgtaaaa gtggcatgct caatctaag 1380
ggaagatgtt acgagtttct aaatttgtgt aagagaatga tactaccata cacatcgat 1440
cattgttctt ctctctttga tgctaccata aatcgcgagc aggcttggtt ttactcccta 1500
gagtttctcc agtatgattt tgaaactgag aggagaattg cgcattggagc taaagacatt 1560
ccccatgttt acaataagggt agtaaagaat gtaaaagatt tggatagact gtgtgccttg 1620
tactgttaca aatgcgtatc tcctgtcgta tgtgatgagc cgaatgaaag tacggactat 1680
gaaatgggtg atgtaactcc cctctaatc aatcttaccg agattgttga ttcggaagag 1740
tatgatgatg gtcccggaaa tcatatgtgg ccagcaaaat ttacctgtaa ctttattgag 1800
ggttccagtg gagaaacacc caccattagt acgtgcagag atgctgtaac ttttctagga 1860
agagcaccga ggaagaaaat ggcaggatgg gatgatcaat cggcagtgag gcaagccatt 1920
atagcgctag ccaactggag aaagagtggg gaattgcccc aaaatatgtt tgatttacta 1980
gaaggggtaa atgccgtact ttatagaggg gacagtttct tgttacgtgc gataaactac 2040
ccctgtgtta ttgtagatc catgagccct agtctggaac tcgttaaaag aaaggtgaat 2100
aaaattgctt taataaaggc cttcttccac gagaaaaggg tgcgctccaga cgcatctaaa 2160
aagttacttg aatgggcaga actattagtc aaaagttatc tcatggaagt tttacttcag 2220
acgccagaat gtgtcataca ccgcgcccac tcatgttag gcaaaactct cctcattact 2280
gacgaattgg ttcacatgag tccagatgat gccacaagaa acgcctatat ccagaacct 2340
aatgcggcca gacagaatgc ggctgctgca gcctcatttt ctgggtcgct ccccaaacct 2400
gaatttgttc cctgcaagaa aaggacgatt gaattgatgt atgaaaagga caatgatgat 2460
gttagagttg taaattgtcc ttcatgtaaa aaggctatcc agaaatatgg aggttgtgtg 2520
aatgtgtttt gtgaatgtgg aacaaacatg tgctggatat gtgaagagaa ggtttctcct 2580
gctgattcta atcatttgtt ggagaaacac aggattgttt atagtaactg tgttagggtt 2640
aaatatgcct tagaaagtat gtacgggttt gagatttgta ccatgaaaaa tgtagaagaa 2700
ggagttaaaa attattatgt aatggagaat ggatttttct ttgatgtaca agaaatggtt 2760
gctaagaaat aa 2772

```

&lt;210&gt; 123

&lt;211&gt; 919

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 123

```

Met Ser Ser Ser Ser Ser Ser Ser Phe Ser Phe Arg Ile Ser Thr Tyr
1 5 10 15
Gln Thr Phe Leu Lys Ala His Pro Asp Leu Val Asp Lys Ile Thr Gln
20 25 30
Lys Cys Asp Glu Thr Gly Arg Asn Gln Lys Cys Pro Ile Gln Phe Leu
35 40 45
Ala Asp Ile Ser His Leu Ile Gln Gly Glu Arg Asn Gly Gly Asn Leu
50 55 60
Phe Pro Leu His Pro Phe Lys Asn Gln Pro His Leu Glu Pro Arg Ile
65 70 75 80
Val Gly Ser Leu His Gly Arg Thr Leu Asp Asn Asp Ile Glu Glu Ser
85 90 95
Tyr Cys Tyr Phe Val Lys Asp Leu Tyr Asn Gly Val Phe Ser Tyr Val
100 105 110
Asn Gly Val Lys Glu Leu Gln Gly Val Leu Asp Lys Lys Ile Ser Gly
115 120 125
Ser Gly Ser Gly Glu Ser Ser Ser Ser Arg Ala Pro Leu Ile Pro Ile

```

130	135	140
Thr Asp Val Asp Leu Leu Tyr Ile Phe Gly Thr Leu Val Val Leu Pro		
145	150	155
Pro Arg Ser Lys Ala Tyr Arg Val Ile Thr Glu Ala Val Leu Ala Leu		160
	165	170
Pro Phe Asn Glu Phe Ser Asn Asn Trp Pro Pro Thr Asn Ile Lys Gly		175
	180	185
Ala Tyr Val Ser Arg Asp Phe Arg Met Phe Asn Leu Leu Ala Gly Leu		190
	195	200
Asp His Ile Glu Gly Glu Val Gly Gly Glu Ser Glu Trp Glu Ser Ile		205
	210	215
His Ala Ser Val Val Lys Arg Met Val Thr Ile Met Arg Asn Lys Ala		220
	225	230
Glu Lys Lys Pro Pro Ser Thr Ser Arg Ile Phe Arg Val Tyr Val Ala		235
	245	250
Glu Pro Val Asn Asp Ala Val Thr Lys Ile Pro Ile Arg Val Leu Ser		255
	260	265
Lys Leu Phe Gly Ser Arg Leu Ala Gly Ile Leu Gln Lys Val Tyr Ser		270
	275	280
Tyr Ser Met Leu Asn Leu Pro Tyr Leu Leu Ser Ser Asn Ser Ile Asp		285
	290	295
Ile Lys Gln Gly Val Lys Gly Ile Thr Leu Ser Ile Pro Ser Ala Arg		300
	305	310
Lys Leu Gly Phe Tyr Leu Leu Gln Lys Asp Thr Thr Leu Gln Ser Ser		315
	325	330
Leu Ser Gln Asp Val Ala Asp Cys Ile Val Ser Ile Asn Ala Gly Ile		335
	340	345
Ile Gly Asp Asp Phe Ser Glu Lys Ile Arg Gln Cys Ile Glu Glu Lys		350
	355	360
Asn Lys Pro Glu Asn Cys Cys Met Cys Phe Cys Glu Ile Asp Lys Thr		365
	370	375
Pro Asp Phe Ser Tyr Ser Glu His Val Ala Arg His Asn Phe Phe Pro		380
	385	390
Val His Ala Phe Ser Ser Ser His Asp Asp Lys Cys Cys Gly Ala Lys		395
	405	410
Ile Cys Ser Glu Cys Ile Phe Pro Tyr Ile Ile Ser Leu Tyr Glu Lys		415
	420	425
Met Thr Gly Val Ala Gly Val Lys Val Val Asp Leu Phe Gln Cys Pro		430
	435	440
Gly Cys Lys Ser Gly Met Leu Asn Leu Lys Gly Arg Cys Tyr Glu Phe		445
	450	455
Ser Asn Leu Cys Lys Arg Met Ile Leu Pro Tyr Thr Ser Thr His Cys		460
	465	470
Ser Ser Leu Phe Asp Ala Thr Ile Asn Arg Ala Glu Ala Cys Phe Tyr		475
	485	490
Ser Leu Glu Phe Leu Gln Tyr Asp Phe Glu Thr Ala Arg Arg Ile Ala		495
	500	505
His Gly Ala Lys Asp Ile Pro His Val Tyr Asn Lys Val Val Lys Asn		510
	515	520
Val Lys Asp Leu Asp Arg Leu Cys Ala Leu Tyr Cys Tyr Lys Cys Val		525
	530	535
Ser Pro Val Val Cys Asp Glu Pro Asn Glu Ser Thr Asp Tyr Glu Met		540
	545	550
Val Asp Val Thr Pro Pro Leu Ile Asn Leu Thr Glu Ile Val Asp Ser		555
	565	570
Glu Glu Tyr Asp Asp Gly Pro Gly Asn His Met Trp Pro Ala Lys Phe		575
	580	585
Thr Cys Asn Phe Ile Ala Gly Ser Ser Gly Glu Thr Pro Thr Ile Ser		590
	595	600
Thr Cys Arg Asp Ala Val Thr Phe Leu Gly Arg Ala Pro Arg Lys Lys		605
	610	615
		620

Met Ala Gly Trp Asp Asp Gln Ser Ala Val Gly Gln Ala Ile Ile Ala  
625 630 635 640  
Asn Trp Arg Lys Ser Gly Glu Leu Pro Lys Asn Met Phe Asp Leu Leu  
645 650 655  
Glu Gly Val Asn Ala Val Leu Tyr Arg Gly Asp Ser Phe Leu Leu Arg  
660 665 670  
Ala Ile Asn Tyr Pro Cys Val Ile Gly Arg Ser Met Ser Pro Ser Leu  
675 680 685  
Glu Leu Val Lys Arg Lys Val Asn Lys Ile Ala Leu Ile Lys Ala Phe  
690 695 700  
Phe His Glu Lys Arg Val Arg Pro Asp Ala Ser Lys Lys Leu Leu Glu  
705 710 715 720  
Trp Ala Glu Leu Leu Val Lys Ser Tyr Leu Met Glu Val Leu Leu Gln  
725 730 735  
Thr Pro Glu Cys Val Ile His Arg Ala His Ser Phe Val Gly Lys Thr  
740 745 750  
Leu Leu Ile Thr Asp Glu Leu Val His Met Arg Pro Asp Asp Ala Thr  
755 760 765  
Arg Asn Ala Tyr Ile Gln Asn Leu Asn Ala Ala Arg Gln Asn Ala Ala  
770 775 780  
Ala Ala Ala Ser Phe Ser Gly Ser Leu Pro Lys Pro Glu Phe Val Pro  
785 790 795 800  
Cys Lys Glu Arg Thr Ile Glu Trp Met Tyr Glu Lys Asp Asn Asp Asp  
805 810 815  
Val Arg Val Val Asn Cys Pro Ser Cys Lys Lys Ala Ile Gln Lys Tyr  
820 825 830  
Gly Gly Cys Val Asn Val Phe Cys Glu Cys Gly Thr Asn Met Cys Trp  
835 840 845  
Ile Cys Glu Glu Lys Val Ser Pro Ala Asp Ser Asn His Cys Val Glu  
850 855 860  
Lys His Arg Ile Val Tyr Ser Asn Cys Val Arg Val Lys Tyr Ala Leu  
865 870 875 880  
Glu Ser Met Tyr Gly Phe Glu Ile Cys Thr Met Lys Asn Val Glu Glu  
885 890 895  
Gly Val Lys Asn Tyr Tyr Val Met Glu Asn Gly Phe Phe Phe Asp Val  
900 905 910  
Gln Glu Met Val Ala Lys Lys  
915

&lt;210&gt; 124

&lt;211&gt; 1536

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 124

atggctgaaa ccgtcgccgt tgatgaggtg cctacctgtc ccatctgtat ggggtgattac 60  
gattcggaca cggattgcta taactgggtca aatggaggga tgccgtgttg caggaaaagt 120  
gtccacctgg agtgtctttt cacctggaga tttgaagagc atatggtgaa tgaaaatcac 180  
ctgttatgtc ccatgtgtag ggcctatata cccctgtgtt ggttcttccg taaagtgtat 240  
gaagaggtgt acaagtatgc ctcttttcac tcatttttgt tgtctgctga ctatgttaat 300  
gatgaagggtg taaaggatac ccttaataag atgtcaacta ttctagcacc tactttcttt 360  
gtccccaatg ccaaagggtg taatgagaat gaggatgttt atatggagag ggcttatacc 420  
aagttgagtt tcatgcttga aactctatct agacaggaaa tgcattgcatt cagtgaagag 480  
acccttgaag ataatcatga ggcagcttta atgggtaaat tcaaggatat ccccccttat 540  
gaatatgaag gtgaatggct taagtattga gctccaata ctattgacat tactcaatgc 600  
ttgagtaatg atgatgatga tgatgaaggt gataataatg tctcccttag tttgttgtct 660  
ggtgtgacat ccttcaattt cattgaagat gatgaggata ctgtagtgtt tgtcccccca 720  
gaggttagatg ataatgatga ctcagagtca cttcctgact tgactgttcc ccctagaagt 780  
aacaatatta cctttgatac tattagtggg attagtagtt cactttatga tggttaatgat 840  
gatgatgatg atgatgacac aatgtctttg cctgacttga atatgcctag tgcttctacg 900



```

tcattccgcc ctacctcacc cgcacctacc tcaacctctc ttaacattaa tgttaacctt 960
tggttttaatg ttgattcaga ctctgatgac gaagaagtaa taccttcttc gtcattcagt 1020
aatcagccct ctacttcctc aggaagtagt agtagtagta gtaacagtag aaagaggcca 1080
aggtatgggc gtgacgagga caggatgtct aatatttcct ctgagagtaa gagactgtgt 1140
gtagatgtca agaggtatat gtgtagactc gataatattg atgaggagta taatgagatt 1200
gccaataggt atctggctga actttctgct cttagagaaa ggagacagga aactgagaat 1260
aagcttgagg attgtatatc tagaggtaac ctgttccata caactgtcaa tgatgtaatt 1320
ggtaagagtt tgtgctctaa gaaattgaag gtgaagcgta agtacgcttc aaagtggagt 1380
gctaataagc agctaattgg ttcctgtctc attaagtcag cctctaataa tgctaggttg 1440
gatgacgaaa ttgcacatgt acacagttca ttgttgaatg ggtttgatac tgacccttcg 1500
gaagctgatac aaatatcttc cctgcccaat ctataa 1536

```

&lt;210&gt; 125

&lt;211&gt; 509

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 125

```

Met Ala Glu Thr Val Ala Val Asp Glu Val Pro Thr Cys Pro Ile Cys
1      5      10      15
Met Gly Asp Tyr Asp Ser Asp Thr Asp Cys Tyr Asn Trp Ser Asn Gly
20     25     30
Gly Met Pro Cys Cys Arg Lys Ser Val His Leu Glu Cys Leu Phe Thr
35     40     45
Trp Arg Phe Glu Glu His Met Val Asn Glu Asn His Leu Leu Cys Pro
50     55     60
Met Cys Arg Ala Tyr Ile Pro Pro Val Trp Phe Phe Arg Lys Val Tyr
65     70     75     80
Glu Glu Val Tyr Lys Tyr Ala Ser Phe His Ser Phe Leu Leu Ser Ala
85     90     95
Asp Tyr Val Asn Asp Glu Gly Val Lys Asp Thr Leu Asn Lys Met Ser
100    105    110
Thr Ile Leu Ala Pro Thr Phe Phe Val Pro Asn Ala Lys Gly Val Asn
115    120    125
Glu Asn Glu Asp Val Tyr Met Glu Arg Ala Tyr Thr Lys Leu Ser Phe
130    135    140
Met Leu Glu Thr Leu Ser Arg Gln Glu Met His Ala Phe Ser Glu Glu
145    150    155    160
Thr Phe Glu Asp Asn His Glu Ala Ala Leu Met Gly Lys Phe Lys Asp
165    170    175
Ile Pro Pro Tyr Glu Tyr Glu Gly Glu Trp Leu Lys Tyr Val Ala Pro
180    185    190
Asn Thr Ile Asp Ile Thr Gln Cys Leu Ser Asn Asp Asp Asp Asp
195    200    205
Glu Gly Asp Asn Asn Val Ser Pro Ser Leu Leu Ser Gly Val Thr Ser
210    215    220
Phe Asn Phe Ile Glu Asp Asp Glu Asp Thr Val Val Phe Val Pro Pro
225    230    235    240
Glu Val Asp Asp Asn Asp Asp Ser Glu Ser Leu Pro Asp Leu Thr Val
245    250    255
Pro Pro Arg Ser Asn Asn Ile Thr Phe Asp Thr Ile Ser Gly Ile Ser
260    265    270
Ser Ser Leu Tyr Asp Val Asn Asp Asp Asp Asp Asp Asp Thr Met
275    280    285
Ser Leu Pro Asp Leu Asn Met Pro Ser Ala Ser Thr Ser Ser Ala Pro
290    295    300
Thr Ser Ser Ala Pro Thr Ser Thr Ser Leu Asn Ile Asn Val Asn Leu
305    310    315    320
Cys Phe Asn Val Asp Ser Asp Ser Asp Asp Glu Glu Val Ile Pro Ser
325    330    335
Ser Ser Ser Val Asn Gln Pro Ser Thr Ser Ser Gly Ser Ser Ser Ser

```

			340					345					350			
Ser	Ser	Asn	Ser	Arg	Lys	Arg	Pro	Arg	Tyr	Gly	Arg	Asp	Glu	Asp	Arg	
		355					360					365				
Met	Ser	Asn	Ile	Ser	Ser	Glu	Ser	Lys	Arg	Leu	Cys	Val	Asp	Val	Lys	
		370				375					380					
Arg	Tyr	Met	Cys	Arg	Leu	Asp	Asn	Ile	Asp	Glu	Glu	Tyr	Asn	Glu	Ile	
385					390					395					400	
Ala	Asn	Arg	Tyr	Leu	Ala	Glu	Leu	Ser	Ala	Leu	Arg	Glu	Arg	Arg	Gln	
				405					410					415		
Glu	Thr	Glu	Asn	Lys	Leu	Gly	Asp	Cys	Ile	Ser	Arg	Gly	Asn	Leu	Phe	
			420					425					430			
His	Thr	Thr	Val	Asn	Asp	Val	Ile	Gly	Lys	Ser	Leu	Cys	Ser	Lys	Lys	
		435					440					445				
Leu	Lys	Val	Lys	Arg	Lys	Tyr	Ala	Ser	Lys	Trp	Ser	Ala	Asn	Lys	Gln	
	450					455					460					
Leu	Ile	Gly	Ser	Cys	Leu	Ile	Lys	Ser	Asn	Asn	Ala	Arg	Leu	Asp	Asp	
465					470					475				480		
Glu	Ile	Ala	His	Val	His	Ser	Ser	Leu	Leu	Asn	Gly	Phe	Asp	Thr	Asp	
				485					490					495		
Pro	Ser	Glu	Ala	Asp	Gln	Ile	Ser	Ser	Leu	Pro	Asn	Leu				
			500					505								

<210>	126
<211>	1746
<212>	DNA
<213>	SHRIMP

<b>&lt;400&gt;</b>	<b>126</b>						
atgggggggac	ccactgtaat	tactactacc	atcaatactg	gtggagacca	ccaccaccag	60	
cagtatgttt	accatcaggg	gaataaaaaa	cggcctgtgg	aagaatataa	caacaacaac	120	
tacgcgtctt	gttcaacctc	cgaagccaca	actgttcccc	cttacacataa	caacaacaac	180	
aacatcacta	tcaagacttg	ggatgacgtc	atcaacctta	gctatcacgc	ccctccccct	240	
aaacgtttca	agaagtctga	agttgtctcc	tctcctccca	ctactcgcac	cttttcaaac	300	
gtgtgtgctg	ccaaggtgat	taggcagtgt	aagaggcagt	ataatgagtg	gattgaacgt	360	
gattccccct	actactttaa	aggcatgtag	aagagttgta	gtcttgagga	caattatgat	420	
acctgtcaac	agttgagaat	tggccatagg	tcaattgtta	agtcctagcaa	gtatgtccat	480	
gatacctgtt	tctatggaaa	ggacctataa	gttggcttct	attggcccac	ctctctttgc	540	
gatgaagaga	tgagattttt	tgacactaga	cacattctta	aggagttgtc	tagtcgtaat	600	
attccgtcct	cccagattat	ggacataatg	tatatggctg	tagagggtgt	ccaattgcct	660	
tcaagtgcct	gtgagcgaat	tagacaaaag	actagcacgc	taattaagga	agtttctgac	720	
cagtgtgaga	actgggaaaa	cttccgtaag	actgctcgtg	gttgtttgtc	tgattttggtc	780	
gaagtgcctg	aagatgtgaa	ggactttaac	actttcatct	gtccctggga	gacctttttt	840	
gagattaaat	atgggggtcta	ttacattgtg	aataggggga	ctgttgtcaa	gtttatgaag	900	
gatatgaact	atgaagagtt	tgtttttgag	tgtgttaatg	gcctttctgt	atacagaaag	960	
aatattaagg	gggtagttgg	ggtgactggt	gtgtgtcctc	aggggttatg	tttagagatg	1020	
ccattttgac	gtatcagtat	tgatgatgtc	attaggtgtg	tcaaggatag	tttagatggt	1080	
ggggagtatt	atgagtcaag	ggacgcagct	ttgttgtatg	gggtgtgtat	gcttcaaagg	1140	
atggggacgt	taccagaggt	aaagggggtt	gatacagtcg	caccaataac	agactctttc	1200	
attgcccgaa	aggttgtaag	aagtatgttt	gaaaaactaa	aggtgaacat	gccttttgtt	1260	
ttggctgaga	cttgtaatgt	aattacaaga	gttgcaaattg	aggggaattat	taatgtcgat	1320	
ataaaggctg	ataactttgt	tatagatagc	atatctggcc	aacctaaaat	gattgacttg	1380	
ggaactctcat	acctctagg	tattgtttac	aacgatgaat	attttaggaa	cacggaagaa	1440	
ctaatcaggc	agtacattca	cacactctcc	gagttcttta	ggggacactg	tctaggtgcc	1500	
tattcaatga	cgtacagttt	cagtgtaatg	gcttccagta	tactggaaga	tgttgttgct	1560	
tgttctaaca	tggaaggccc	tgcctttaat	ttgatgtcaa	acatgcactt	tttgatgttg	1620	
ttgcaaagcg	gaacagacac	tgatttctat	caaaatcgcc	cttcaatcac	agaatatgcc	1680	
cttgccatga	agcacatatt	cccttttaag	gggactgtaa	tgaacctgtt	taaagtaaag	1740	
aaatga						1746	

<210> 127

<211> 575  
 <212> PRT  
 <213> SHRIMP

<400> 127

Met	Gly	Gly	Pro	Thr	Val	Ile	Thr	Thr	Thr	Ile	Asn	Thr	Gly	Gly	Asp
1				5					10					15	
His	His	His	Gln	Tyr	Val	Tyr	His	Gln	Gly	Asn	Lys	Lys	Arg	Pro	
			20				25					30			
Val	Glu	Glu	Tyr	Asn	Asn	Asn	Asn	Tyr	Ala	Ser	Gly	Ser	Thr	Ser	Glu
			35				40					45			
Ala	Thr	Thr	Val	Pro	Ala	Tyr	Asn	Asn	Asn	Asn	Asn	Asn	Ile	Thr	Ile
			50				55					60			
Lys	Thr	Trp	Asp	Asp	Val	Ile	Asn	Leu	Ser	Ile	Thr	Pro	Pro	Pro	Pro
65					70					75					80
Lys	Arg	Phe	Lys	Lys	Ser	Glu	Val	Ala	Pro	Ser	Pro	Pro	Thr	Thr	Arg
				85					90					95	
Thr	Phe	Ser	Asn	Val	Cys	Ala	Ser	Lys	Val	Ile	Arg	Gln	Cys	Lys	Arg
			100					105					110		
Gln	Tyr	Asn	Glu	Trp	Ile	Glu	Arg	Asp	Ser	Pro	Tyr	Tyr	Phe	Lys	Gly
			115					120				125			
Ile	Glu	Lys	Ser	Cys	Ser	Leu	Glu	Asp	Asn	Tyr	Asp	Thr	Cys	Gln	Gln
			130				135					140			
Leu	Arg	Ile	Gly	His	Arg	Ser	Ile	Val	Lys	Ser	Ser	Lys	Tyr	Val	His
145					150					155					160
Asp	Thr	Cys	Phe	Tyr	Gly	Lys	Asp	Pro	Lys	Val	Gly	Phe	Tyr	Trp	Pro
				165					170					175	
Thr	Ser	Ser	Cys	Asp	Glu	Glu	Met	Arg	Phe	Phe	Asp	Thr	Arg	His	Ile
			180					185					190		
Leu	Lys	Glu	Leu	Ser	Ser	Arg	Asn	Ile	Pro	Ser	Ser	Gln	Ile	Met	Asp
			195				200					205			
Ile	Met	Tyr	Met	Ala	Val	Glu	Val	Phe	Gln	Leu	Pro	Ser	Ser	Ala	Cys
			210				215				220				
Glu	Arg	Ile	Arg	Gln	Lys	Thr	Ser	Thr	Leu	Ile	Lys	Glu	Val	Ser	Asp
225					230					235					240
Gln	Cys	Glu	Asn	Trp	Glu	Asn	Phe	Arg	Lys	Thr	Arg	Cys	Leu	Ser	Asp
				245					250					255	
Leu	Val	Glu	Val	Pro	Glu	Asp	Val	Lys	Asp	Phe	Asn	Thr	Phe	Ile	Cys
			260					265					270		
Pro	Trp	Glu	Thr	Phe	Phe	Glu	Ile	Lys	Tyr	Gly	Val	Tyr	Tyr	Ile	Val
			275				280					285			
Asn	Arg	Gly	Thr	Val	Val	Lys	Phe	Met	Lys	Asp	Met	Asn	Tyr	Glu	Glu
			290			295					300				
Phe	Val	Phe	Glu	Cys	Val	Asn	Gly	Leu	Ser	Val	Tyr	Arg	Lys	Asn	Ile
305					310					315					320
Lys	Gly	Val	Val	Gly	Val	Thr	Gly	Val	Cys	Pro	Gln	Gly	Leu	Cys	Leu
				325					330					335	
Glu	Met	Pro	Phe	Ala	Gly	Ile	Ser	Ile	Asp	Asp	Val	Ile	Arg	Cys	Val
			340					345					350		
Lys	Asp	Ser	Leu	Asp	Gly	Gly	Glu	Tyr	Tyr	Glu	Ser	Arg	Asp	Ala	Arg
			355				360					365			
Leu	Leu	Tyr	Gly	Val	Val	Met	Leu	Gln	Arg	Met	Gly	Arg	Leu	Pro	Glu
			370			375					380				
Val	Lys	Gly	Val	Asp	Thr	Val	Ala	Pro	Ile	Thr	Asp	Ser	Phe	Ile	Ala
385					390					395					400
Arg	Lys	Val	Val	Arg	Ser	Met	Phe	Glu	Lys	Leu	Lys	Val	Asn	Met	Pro
				405					410					415	
Phe	Val	Leu	Ala	Glu	Thr	Cys	Asn	Val	Ile	Thr	Arg	Val	Ala	Asn	Glu
			420					425					430		
Gly	Ile	Ile	Asn	Val	Asp	Ile	Lys	Ala	Asp	Asn	Phe	Val	Ile	Asp	Ser
			435				440					445			

```

Ile Ser Gly Gln Pro Lys Met Ile Asp Leu Gly Leu Ser Tyr Pro Leu
  450      455      460
Gly Tyr Cys Tyr Asn Asp Glu Tyr Phe Arg Asn Thr Glu Glu Leu Ile
465      470      475      480
Arg Gln Tyr Ile His Thr Pro Pro Glu Phe Phe Arg Gly His Cys Leu
      485      490      495
Gly Ala Tyr Ser Met Thr Tyr Ser Phe Ser Val Met Ala Ser Ser Ile
      500      505      510
Asp Val Val Ala Cys Ser Asn Met Glu Gly Pro Ala Phe Asn Leu Met
      515      520      525
Ser Asn Met His Phe Leu Met Leu Leu Gln Ser Gly Thr Asp Thr Asp
      530      535      540
Phe Tyr Gln Asn Arg Pro Ser Ile Thr Glu Tyr Ala Met Lys His Ile
545      550      555      560
Phe Pro Phe Lys Gly Thr Val Met Asn Leu Phe Lys Val Lys Lys
      565      570      575

```

<210> 128  
 <211> 1200  
 <212> DNA  
 <213> SHRIMP

```

<400> 128
atgcttagca cgtgtgatct aaagcaccct tcttcaacag acggaaatgt acttaaaaaat 60
attcactttt ctgaatcaat tccagctaatt gatataattt ctttcccttc ctctgacacg 120
gaagaattaa acaaggattht actggatagt gtaagaaatc agatcaaatt cgggttcgac 180
ccaatcactg aaacgttgaa aaattgtata actactcaaa cacttttaca ctcttttctc 240
aagagtagtc tcctgactct acaagaaaaa tttaatgaat ggggatcaat tcaactagag 300
aaaggaggac aggaaatggc actgtgtgcg agccttaaaa tcatgggcca aatatcagct 360
ttaattgaaa ctgcaaagga ggcctcaatg gataataaaa agaagaataa taatgcatgt 420
gcgaattgcc gggatagtaa gtgttcggcc agtttagtta cattatttaa taaaactatc 480
gatgaaaagt atgttaagca aaactcttca tcagcctcgg ctcttctggc aaatactttc 540
acggctggtg caaataaacc acccaaagag tttataacaa aagataatgc acatggcaat 600
tctgatacta attatacagc catgagtgat aaccttattt gtccaggcaa atactactca 660
tctgatatta catatgaagt aacaaagcaa gctaaagaac gcataaaaaa taacaataag 720
aaaatgagac tagcaacagg cgtggaaaatg gtaatgaagg aactagaagc agaaaaataat 780
aaagaaggag gaagagtaga agtagaggta gaaggagtag aacaacagca accgtccacg 840
tcgggggaag aaatgcagat ggaattatgt ttgcctacac ctctctcccc ggatctagaa 900
tctctagtga cagagggtgt ggatgattat cctgtgtttt caccactccc ttcatatttg 960
tcacctatgc cagctagtcc acttcttctt aatgggaata gtgactgga agatgggggg 1020
ccttttgccc cttcagctga tattgttgtt gataaaacat cagaaattat gggcagaaca 1080
cctggctcag aatgggttca ccagagagac aggaatagta aaatggagat acgaaactat 1140
ggggcaagag ggtctggtat aaatactgga agatatagaa gaaataacac tgttctatag 1200

```

<210> 129  
 <211> 395  
 <212> PRT  
 <213> SHRIMP

```

<400> 129
Met Leu Ser Thr Cys Asp Leu Lys His Pro Ser Ser Thr Asp Gly Asn
  1      5      10      15
Val Leu Lys Asn Ile His Phe Ser Glu Ser Ile Pro Ala Asn Asp Ile
      20      25      30
Ile Ser Phe Pro Ser Ser Asp Thr Glu Glu Leu Asn Lys Asp Leu Leu
      35      40      45
Asp Ser Val Arg Asn Gln Ile Lys Phe Gly Phe Asp Pro Ile Thr Glu
      50      55      60
Thr Leu Lys Asn Cys Ile Thr Thr Gln Thr Leu Leu His Ser Phe Leu

```

65					70					75					80
Lys	Ser	Ser	Leu	Leu	Thr	Leu	Gln	Glu	Lys	Phe	Asn	Glu	Trp	Gly	Ser
				85					90					95	
Ile	Gln	Leu	Glu	Lys	Gly	Gly	Gln	Glu	Met	Ala	Leu	Cys	Ala	Ser	Leu
			100					105					110		
Lys	Ile	Met	Gly	Gln	Ile	Ser	Ala	Leu	Ile	Glu	Thr	Ala	Lys	Glu	Ala
		115					120					125			
Ser	Met	Asp	Asn	Lys	Lys	Lys	Asn	Asn	Asn	Ala	Cys	Ala	Asn	Cys	Arg
		130					135				140				
Asp	Ser	Lys	Cys	Ser	Ala	Ser	Leu	Val	Thr	Leu	Phe	Asn	Lys	Thr	Ile
145					150					155					160
Asp	Glu	Lys	Tyr	Val	Lys	Gln	Asn	Ser	Ser	Ser	Ala	Ser	Ala	Leu	Leu
				165					170					175	
Ala	Asn	Thr	Phe	Thr	Ala	Gly	Ala	Asn	Lys	Pro	Pro	Lys	Glu	Phe	Ile
			180					185					190		
Thr	Lys	Asp	Asn	Ala	His	Gly	Asn	Ser	Asp	Thr	Asn	Tyr	Thr	Ala	Met
		195					200					205			
Ser	Asp	Asn	Leu	Ile	Cys	Pro	Gly	Lys	Tyr	Tyr	Ser	Ser	Asp	Ile	Thr
	210					215					220				
Tyr	Glu	Val	Thr	Lys	Gln	Ala	Lys	Glu	Arg	Ile	Lys	Asn	Asn	Asn	Lys
225					230					235					240
Lys	Met	Arg	Leu	Ala	Thr	Gly	Val	Glu	Met	Val	Met	Lys	Glu	Leu	Glu
				245					250					255	
Ala	Glu	Asn	Asn	Lys	Glu	Gly	Gly	Arg	Val	Glu	Val	Glu	Val	Glu	Gly
			260					265					270		
Val	Glu	Gln	Gln	Pro	Ser	Thr	Ser	Gly	Glu	Glu	Met	Gln	Met	Glu	
		275					280					285			
Ile	Met	Leu	Pro	Thr	Pro	Pro	Pro	Pro	Asp	Leu	Glu	Ser	Leu	Val	Thr
	290					295					300				
Glu	Gly	Val	Asp	Asp	Tyr	Pro	Val	Phe	Ser	Pro	Leu	Pro	Ser	Leu	Leu
305					310					315					320
Ser	Pro	Met	Pro	Asp	Leu	Pro	Ser	Asn	Gly	Asn	Ser	Ala	Leu	Glu	Asp
				325					330					335	
Gly	Gly	Pro	Phe	Ala	Pro	Ser	Ala	Asp	Ile	Val	Val	Asp	Lys	Thr	Ser
			340					345					350		
Glu	Ile	Met	Gly	Arg	Thr	Pro	Gly	Ser	Glu	Trp	Val	His	Gln	Arg	Asp
		355					360					365			
Arg	Asn	Ser	Lys	Met	Glu	Ile	Arg	Asn	Tyr	Gly	Arg	Ser	Gly	Ile	Asn
	370					375					380				
Thr	Gly	Arg	Tyr	Arg	Arg	Asn	Asn	Thr	Val	Leu					
385					390					395					

&lt;210&gt; 130

&lt;211&gt; 1233

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 130

atggaagaac	atctatcctt	caacaaaccc	tctccagaaa	atggagtagt	cttctttgac	60
tttagtgata	atacttctat	gtctaacatg	gtagacaata	tccggcacag	acttcctatg	120
gacaagaaat	tttctctcaa	ggctctactc	ttggcctcta	cgcccatcc	cagtgcagaa	180
caactctcca	ccaaagtaaa	caaggcaata	ttttctcata	gagaaactat	tgttttatct	240
aaagcgtaaa	agattgttgt	tactggactt	tatgtagatg	gggaatatgt	ggatgatgtt	300
atttgccctc	atccagaaaa	acacaccttg	aatgggattc	tgagatatgt	tgtgcatcta	360
aatatgatgt	taatggacaa	ggcagaagac	gcagacgaaa	ttcgttgtgg	acttattcct	420
ctaggagagag	ggtttaatag	agaggctttc	aagtttgtgg	acccagttat	cccttggtgc	480
ggctacaaca	tattgaatgg	ataccacca	gataatggcc	accaaattct	cccttcatct	540
actcaaccac	aggtgcaaa	aagatgcgca	gtcaagcaaa	tgtacaaaca	aatcaatggc	600
atgtttgaag	tggtgaaaca	attttcaatc	aaacacaaca	atagaatctt	cactataaat	660
caagttgatt	ttaaagggtga	agaaatgaaa	atgttctttg	ctctctacag	cgaagagtta	720

```

cttcctttct attcagaaac gggaaaatta ttatctgaga aacacgtctc caaatcattt 780
tctcagttgc ctccacatgt gaccatttct gttttctatt tgcgaaatat ggaagaatac 840
aatactctga tgaaaacaga ttttgggagt tgttttgcac cagctatcaa aatcgacact 900
ggggataatt ttgagttggt tgggatgaac aacaacattc tcgtatccaa agtatgtgtt 960
ggagatgatg cactcgattt gcgtagacga ataatggaac acatttcaga tgcaataggg 1020
agaaatgttg aactcgctga caacagactg aatcctcaca tcactcatgg gaagattaat 1080
gaggggtgtg ttggtgaatg ggtgagcaga ttcgctccgt gcaatttcct ttgtaaaccg 1140
aggggaagaaa ttgtattcgg aggtacaaaa ttcatttttg gaagggtcag taatggaaac 1200
tatgtaataa aacaaccagt tgattatgta tga 1233

```

<210> 131  
 <211> 404  
 <212> PRT  
 <213> SHRIMP

<400> 131

Met	Glu	Glu	His	Leu	Ser	Phe	Asn	Lys	Pro	Ser	Pro	Glu	Asn	Gly	Val
1				5					10					15	
Val	Phe	Phe	Asp	Phe	Ser	Asp	Asn	Thr	Ser	Met	Ser	Asn	Met	Val	Asp
			20					25					30		
Asn	Ile	Arg	His	Arg	Leu	Pro	Met	Asp	Lys	Lys	Phe	Ser	Ser	Lys	Ala
		35					40					45			
Leu	Leu	Leu	Ala	Ser	Thr	Pro	Ile	Pro	Ser	Asp	Glu	Gln	Leu	Ser	Thr
	50					55				60					
Lys	Val	Asn	Lys	Ala	Ile	Phe	Ser	His	Arg	Glu	Thr	Ile	Val	Leu	Ser
65					70				75					80	
Lys	Ala	Leu	Lys	Ile	Val	Val	Thr	Gly	Val	Asp	Gly	Glu	Tyr	Val	Asp
				85				90						95	
Asp	Val	Ile	Cys	Leu	Tyr	Pro	Glu	Lys	His	Thr	Leu	Asn	Gly	Ile	Leu
			100					105					110		
Arg	Tyr	Val	Val	His	Leu	Asn	Met	Met	Leu	Met	Asp	Lys	Ala	Glu	Asp
		115					120					125			
Ala	Asp	Glu	Ile	Arg	Cys	Gly	Leu	Ile	Pro	Leu	Gly	Arg	Gly	Phe	Asn
		130				135					140				
Arg	Glu	Ala	Phe	Lys	Phe	Val	Asp	Pro	Val	Ile	Pro	Cys	Ala	Gly	Tyr
145					150					155					160
Asn	Ile	Leu	Asn	Gly	Tyr	His	Pro	Asp	Asn	Gly	His	Gln	Ile	Ser	Pro
				165				170						175	
Ser	Ser	Thr	Gln	Pro	Gln	Val	Gln	Arg	Arg	Cys	Ala	Val	Lys	Gln	Met
			180					185					190		
Tyr	Lys	Gln	Ile	Asn	Gly	Met	Phe	Glu	Val	Val	Lys	Gln	Phe	Ser	Ile
		195					200				205				
Lys	His	Asn	Asn	Arg	Ile	Phe	Thr	Ile	Asn	Gln	Val	Asp	Phe	Lys	Gly
		210				215					220				
Glu	Glu	Met	Lys	Met	Phe	Phe	Ala	Lys	Glu	Glu	Leu	Leu	Pro	Phe	Tyr
225					230				235						240
Ser	Glu	Thr	Gly	Lys	Leu	Leu	Ser	Glu	Lys	His	Val	Ser	Lys	Ser	Phe
				245					250					255	
Ser	Gln	Leu	Pro	Pro	His	Val	Thr	Ile	Ser	Val	Phe	Tyr	Leu	Arg	Asn
			260					265					270		
Met	Glu	Glu	Tyr	Asn	Thr	Leu	Met	Lys	Thr	Asp	Phe	Gly	Ser	Cys	Phe
		275					280					285			
Ala	Pro	Ala	Ile	Lys	Ile	Asp	Thr	Gly	Asp	Asn	Phe	Glu	Leu	Phe	Gly
		290				295					300				
Met	Asn	Asn	Asn	Ile	Leu	Val	Ser	Lys	Val	Cys	Val	Gly	Asp	Asp	Ala
305					310					315					320
Leu	Asp	Leu	Arg	Arg	Arg	Ile	Met	Glu	His	Asp	Ala	Ile	Gly	Arg	Asn
				325					330					335	
Val	Glu	Leu	Ala	Asp	Asn	Arg	Leu	Asn	Pro	His	Ile	Thr	His	Gly	Lys
			340					345					350		
Ile	Asn	Glu	Gly	Val	Val	Gly	Glu	Trp	Val	Ser	Arg	Phe	Ala	Pro	Cys

	355		360		365										
Asn	Phe	Leu	Cys	Lys	Pro	Arg	Glu	Glu	Ile	Val	Phe	Gly	Gly	Thr	Lys
	370					375					380				
Phe	Ile	Phe	Gly	Arg	Val	Ser	Asn	Gly	Asn	Tyr	Val	Ile	Lys	Gln	Pro
385					390					395					400
Val	Asp	Tyr	Val												

<210> 132  
 <211> 2839  
 <212> DNA  
 <213> SHRIMP

<400> 132

atggattcaa	cttctactac	aactatagaa	gcagaaaagg	cactcctaaa	agaatacgtg	60
aatgaaaacc	tgacatggga	attcgtagac	agagttatac	ggcacgagaa	acttatgcag	120
agaactgaca	tgagactgaa	aacatcatcc	agaagactgt	tttcgttcat	ctctatatac	180
agtttccttc	aagatttctt	cactgctcgt	gatggagtaa	atagtgcaga	gtggtgtacc	240
caatcagccc	tgtaccacat	gttggatgga	gttgcttcca	taatatcttg	cttcaggaag	300
aggatagact	actacaacaa	gaagatggag	agattggcct	gcaccagtat	acgtgaagga	360
tactttcttg	tcgatgtgaa	gacaatagaa	tctagacacg	ttgaactact	agatcctgat	420
aagaaaatat	ggcaacgttt	atatgctgaa	aaaattgctc	cagaaaaagt	tgtcgtgca	480
tacaatgaag	tgagcaaat	attgcccgat	gaagcaatgg	caaaactacaa	ctacagaact	540
ggtttggtgc	atctttcggg	tactcttaaa	aatgcaaaaa	agcccccac	tgattttaacg	600
atgacggatt	ttgactttta	tgaaaaatac	ataaggtcag	atattgtatt	gggaaaaatca	660
aacaagttgt	cgggtatggt	tagtgagaat	tttgaaatcc	ttccagacat	aaacattaaa	720
gtgcctcgta	gattggaaag	gtactttaac	gttgaaacga	attatagtct	ggagcacac	780
tttagattcc	ctagcaacca	catcagggga	ttaatatgtg	cttatttcat	tggtaatatt	840
tttggagggtg	ccttttcatg	tgtacaactt	tacctgctcg	gtttcactct	ttctgcggt	900
agtgcattga	gagaaaacgt	actggatact	cccttctcaa	aattgaaaca	gtatataaag	960
aacgacaaca	aaactaaaaa	ttcatcctcc	aatgaagata	atgacgggga	agaatattac	1020
ccctgtgaac	ttcaatatgc	aagaataaac	tctaattgaca	aaaatgcgtg	cagaaaaagt	1080
attgttaaag	cagtgaat	tgtagcagat	agagtggaga	aagcatccgt	cacaatgatg	1140
aggacaccta	tcgccgaaca	cgaatcagat	ggctacatgg	cagactggct	ctcccttcaa	1200
atcttctaac	ttttgggacg	aaagggtgtc	gcttcttatg	ccttgttatt	tatagtgaac	1260
tggtgtgtc	acaagtataa	acagagtgtt	acgaacgatg	ttaatggaag	tgaaaaatac	1320
gagatccttc	tgaagaaatt	gacagtgtgt	tgtgggtcga	catacaacca	caagtgcggc	1380
atggtgtgtc	cagtaatagg	ctttgggttca	gggatgacaa	acagaaaatt	gagacagtat	1440
gcagttcatt	gcattgagaa	tgttataggg	tcttttatct	cttcggggaa	gaggaagaag	1500
gacatccatg	aagaccctaa	aaagttggaa	gaaatgtccc	tgatgcagct	ttctgcgcgc	1560
ctgtttaaga	acaacgacgt	gatgaaacga	gggcaagatg	ggaaggtaac	gttcgcgaat	1620
gaggacaatg	tacaagactt	cttggaaaga	ttaaagacaa	aggagtttgt	gccccaatga	1680
aggagaagaa	aaatccacga	agaggaatac	acaaaatctc	tacacaccaa	tctaaagatg	1740
acgttcagat	ttggcgtctg	tggcctttcaa	caccctcttc	cagctagtag	tgacaagcca	1800
acccaagtgt	ctcttcagct	actaaaacaa	cgtcaaacat	tcgtccagag	agaaactgca	1860
gctgcggtta	attggaccag	attacttcaa	tttttgttcc	cttctgacga	gagggataat	1920
aaaagacatc	aaaattcact	tccttgggaat	aggctagggt	ccaatttaaa	tagacatttc	1980
atatctctag	cctctaaatt	cataaagaga	tctgtgcact	gtgaacgtgt	tgtcaatgat	2040
ataatttcaa	aatttcaatg	agatattctt	cctctcggtg	aagaccacga	ccattttcta	2100
atgaccaagg	ctggtttggt	catagaggat	catgcgaggg	agaatatcga	taatgacagt	2160
tactcgttgt	gtggaggatt	taataaccag	acaacagagc	aaaagttaaa	cagtatacgt	2220
ctacgtatat	cagctgaggc	attaaaaaat	gcaagaaatt	gtgttcttgc	aacaaccttt	2280
tcaaaatcat	acaacgaaga	caggccattt	ttacctcgca	cggatgaggc	aaagtttggtg	2340
cctatacctt	tatttggcgt	ggaaccttta	caccctttac	tcaattcatt	tattgataat	2400
actgcaataa	aatgtaata	tagtgtatga	gatttctggt	tagaagagag	tgacgatatt	2460
tttaaagagg	cattagtctt	tcatacaatt	ctaacagatt	ccagtgtgta	ctcaactctt	2520
gttggagaag	atgaggatta	ttgtgataac	aataagagtg	gaaaacgcat	tggttaataca	2580
ctagtgtgta	cactgtatga	tatgatgggg	agagccaact	ataatggtct	acattcagac	2640
aagcctagaa	agcatgatcc	tacaccatgg	agcagtaaaa	atactggcca	gtctggacgt	2700
agcacgactg	atctttcccc	caactctgtt	attgttctat	tagacactga	gaatgttgca	2760

gatgactatg aagatgagga ggaagattat gaagctttga aacaatcaga gagggataat 2820  
gtcatcacac taaataacg 2839

<210> 133  
<211> 945  
<212> PRT  
<213> SHRIMP

<220>  
<221> VARIANT  
<222> (1)...(945)  
<223> Xaa = Any Amino Acid

<400> 133  
Met Asp Ser Thr Ser Thr Thr Thr Ile Glu Ala Glu Lys Ala Leu Leu  
1 5 10 15  
Lys Glu Tyr Val Asn Glu Asn Leu Thr Trp Glu Phe Val Asp Arg Val  
20 25 30  
Ile Arg His Glu Lys Leu Met Gln Arg Thr Asp Met Arg Leu Lys Thr  
35 40 45  
Ser Ser Arg Arg Leu Phe Ser Phe Ile Ser Ile Tyr Ser Phe Leu Gln  
50 55 60  
Asp Phe Phe Thr Ala Arg Asp Gly Val Asn Ser Asp Glu Trp Cys Thr  
65 70 75 80  
Gln Ser Ala Leu Tyr His Met Leu Asp Gly Val Ala Ser Ile Ile Ser  
85 90 95  
Cys Phe Arg Lys Arg Ile Asp Tyr Tyr Asn Lys Lys Met Glu Arg Leu  
100 105 110  
Ala Cys Thr Ser Ile Arg Glu Gly Tyr Phe Leu Val Asp Val Lys Thr  
115 120 125  
Ile Glu Ser Arg His Val Glu Leu Leu Asp Pro Asp Lys Lys Ile Trp  
130 135 140  
Gln Arg Leu Tyr Ala Glu Lys Ile Ala Pro Glu Lys Val Val Asp Ala  
145 150 155 160  
Tyr Asn Glu Val Ser Lys Leu Leu Pro Asp Glu Ala Met Ala Asn Tyr  
165 170 175  
Asn Tyr Arg Thr Gly Leu Val His Leu Ser Asp Thr Leu Lys Asn Ala  
180 185 190  
Lys Lys Pro Thr Asp Leu Thr Met Thr Asp Phe Asp Phe Tyr Glu  
195 200 205  
Lys Tyr Ile Arg Ser Asp Ile Val Leu Gly Lys Ser Asn Lys Leu Ser  
210 215 220  
Gly Met Phe Ser Glu Asn Phe Glu Ile Leu Pro Asp Ile Asn Ile Lys  
225 230 235 240  
Val Pro Arg Arg Leu Glu Arg Tyr Phe Asn Val Glu Thr Asn Tyr Ser  
245 250 255  
Leu Glu His Asn Phe Arg Phe Pro Ser Asn His Ile Arg Gly Leu Ile  
260 265 270  
Phe Ala Tyr Phe Ile Gly Asn Ile Phe Gly Gly Ala Phe Ser Cys Val  
275 280 285  
Gln Leu Tyr Leu Leu Gly Phe Thr Leu Ser Ala Ala Ser Ala Cys Arg  
290 295 300  
Glu Asn Val Leu Asp Thr Pro Phe Ser Lys Leu Lys Gln Tyr Ile Lys  
305 310 315 320  
Asn Asp Asn Lys Thr Lys Asn Ser Ser Ser Asn Glu Asp Asn Asp Gly  
325 330 335  
Glu Glu Tyr Tyr Pro Cys Glu Leu Gln Tyr Ala Arg Ile Asn Ser Asn  
340 345 350  
Asp Lys Asn Ala Cys Arg Lys Ser Ile Val Lys Ala Val Lys Phe Val  
355 360 365  
Ala Asp Arg Val Glu Lys Ala Ser Val Thr Met Met Arg Thr Pro Ile





Leu Tyr Asp Met Met Gly Arg Ala Asn Tyr Asn Gly Leu His Ser Asp  
 865 870 875 880  
 Lys Pro Arg Lys His Asp Pro Thr Pro Trp Ser Ser Lys Asn Thr Gly  
 885 890 895  
 Gln Ser Gly Arg Ser Thr Thr Asp Phe Ser Pro Asn Ser Val Ile Val  
 900 905 910  
 Leu Leu Asp Thr Glu Asn Val Ala Asp Asp Tyr Glu Asp Glu Glu Glu  
 915 920 925  
 Asp Tyr Glu Ala Leu Lys Gln Ser Asp Asn Val Ile Thr Leu Asn Asn  
 930 935 940  
 Xaa  
 945

<210> 134  
 <211> 4821  
 <212> DNA  
 <213> SHRIMP

<400> 134  
 atgtctcgaa actcttttacg cgtcaaagga ttaaaagaaa atgggggaat tattcccaac 60  
 cctttcgacc ccttatatgt cgatacggac gcccccttcg gtatggctgg agtcaagtca 120  
 gacatcatag ggaaagggtt tgtagaatct ctattaccag gggaaattag ttccattat 180  
 aacacatttg actgttttaa aactcctaaa aaatgtcgcg taggaggcaa cgattttgaa 240  
 tgcattagct gtcgttctct cgggggagga acttgctgca aatccagtag agaattgaaa 300  
 actgaatacg gtatagaaga tgatgatgaa tatgacggag tttgtgtccc tctcgccgat 360  
 actatttttt cagcctcttc tgcgttcgac aagcacgacg atgatgtgac tacagatgca 420  
 gcctacagaa acgtcaaccc ttttactact gtcgaggagg cttatttgca ctacgaatct 480  
 ggaggagtca taactggagg aggaaaaaag ggaacgactt atatcaccaa aaaaagaggg 540  
 tgtgtagatt cgtctgtggt gcgaaaggat ccttcccttc tcaataaaga tccaagatta 600  
 gagcccatc ttgggtgcac agatattgta ctgtgtggag gaaaaggagt ggggcgacct 660  
 atacacccta caacattctc aattattgat gatgtggacg atatcgattt cgacataagc 720  
 agtatgactt ctactatgga ttgtttgtgc gaacctggct actccagca gagagacct 780  
 gccaccaacg ccccaaaatg tgagaagaaa gaaggtggta tacaggaaaa ggaacaggt 840  
 ctaggctgcc ctgtcatgtt caggataggg gttgtaggag atactggaac aaagggtgt 900  
 ctttgtgatg aaagtacaca aatcagactg gaagaagtgg ccggtataga tcttcccgat 960  
 gcggcaaaaa cagattatgc tcaacccttt gtagagggtg caaaattatt gctgcaata 1020  
 acagaaaggt acgaaacttt aggtggtagt actaaggacg cgtgcctccc tagaccagga 1080  
 aacgatacga ggaatcggc tctcgctat tcttatgccg cttctctttt tggaagagca 1140  
 cctgaaatta cagcgtttta cggaggccat ctgattacgg gaggattatt gcgcgaatct 1200  
 gccatggacg ccgccggcaa ttggcactca agaattgaag attctgacga acaaggaaaa 1260  
 ctcacagtca gtgaatctgt aggaggtgta gtgccctaca gtggaacagg aagtgtggcc 1320  
 gctcacatct ggaacggaga tgcactaaac gataatgggc tggttggagc tggaggggga 1380  
 aattttactg aacatccaaa cgcctcgctc agggctcgtc ctttacccca tagcaatatt 1440  
 cccggtttag gaatcgatag catagatcat gctgtgggca taatagcgtc ccagggtaaa 1500  
 atcttccccg agacggttca catgagagca ggcgatcctt caggagtaaa gactgacaga 1560  
 agggatgcgc acaacgatac gaccatagaa acatccttcc ttaaagattc tgacaaggca 1620  
 gggtagcatt cgtacaaaga taacccttta cagaaactga gaaaatctca cgactctggc 1680  
 atatgcgcaa cagcatacgt cgttccttca ctccatagag taataaagga aaaaccttct 1740  
 gctaaaaaat ataaaaacagt aaataagata ttgcccttgg tacactatag acctaccgt 1800  
 aagcgaatgg cccacactcc catcgagaca tttttcaagc actctctttt gacggcaca 1860  
 gaaagagacc aatcttttgc gaacagtaca attaattcta tgatggttac aaattctagt 1920  
 aatagttttg acgacgttac aaatttactt ctggactatt ttttcccaa cttgaacggc 1980  
 gaaggaaaag agaggctctg cctgcccata aatacaagat caatatacaa tgaaccaa 2040  
 aatgccaaat tcaaagaaat tggaggtatt attctgcaac ctgttacagc gcagggtgct 2100  
 aagaaaagtt ccacctttgc aagattcagt gagaaaatat tgtctacaaa ttctcccaa 2160  
 ataattgatc attacaaggc tggttcatct gcagtgttta agaaaagtg ggaagaaaga 2220  
 gcatatgaaa tgtttgctca cctccaact cgtgtggcga tagcttctaa tgaagggaca 2280  
 tttttctcgg gaagaggact aaataatgga atagaaggta cgggtatgcg cgaggccgaa 2340  
 agggctcgaa aaacgttatc aaaaaagccc gatatttttg caggagcaat cctcactgga 2400  
 gatggagttt taatgaatgg tgcattctca cctcttgtaa gacctatgga aattcctgca 2460

```

tcttctctcc ccgaacacac ctggttcgaa cgcagatcgc cgggtcaacgc gagaggagac 2520
cctgggttcgg ccgacaactt gacagccatc aacaacactt atgatcgagt aacaaaggga 2580
gacattagag ctatttctaaa ttcgacaaca gacattaaaa cctccttcaa ttcgtacgct 2640
ccagcacgac ccttttctaa gcctctcgct cctcctgcgg gagtgtctgc ggctgtctaa 2700
gctacatcat ttttgggagt tttaggggga tttcctttac ccataccttc cagttttctc 2760
attcaaaaaga gtgtccaaga atcagtcctc aacggcacgg tcgggtccat gcatggaata 2820
gtccctctaa aattccatga aggggatgaa ttatggcaac aatgtgaagt caaggaaact 2880
gaaggagccc tcaatttcat cctcctcctc atggctctct ttgagtcgct actcagggtt 2940
aggactcttt cctctgaaac gtttattagg ccagaattga tccctaatac gttcagagca 3000
gattgggggtc tgagcccccacacggccggc cactacttga acggcgtgta ctccccgcct 3060
tgtgtcaggg aagaaactgg ccaatctttc ggatacccg gtcgggtgc cctctctcag 3120
tacactacaa tgatggtccc caaacccctg ggcccgaat cacattcttc gttatctaaa 3180
ttttctataa agagtattgt agaggaacaa acacggctac ttcttgccaa tattggagaa 3240
aagagtattt ttgagatgca agatcccta agtaaaaaa tattcgataa aatcggggaa 3300
ttgggagaaa aggagaactg taattgcacc aacggtttat tctgtcccaa agtgaatgga 3360
gggggtagga acaaaactga ccctatagcg gcaacaccta gcagaggaaa taggcattca 3420
cgttttcccc tcatgactac cctccctaaa aacgatgttc atctctctgc agcactcctg 3480
agagctcaat ccggagacgc tagaatacta aatactatcg gagaaactaa aactaatgga 3540
agaaagataa acctaaaagc tgcaacagaa aatatatggg atatatcttc caatgttatg 3600
ttggccccta ataaattttg tgccatgcgt aggagtagcg cttacactcc ttattccaca 3660
agacaagaaa aggtacctgc tgctgttttg gacgaaagga agggtagctt cgatgaatgga 3720
gcagaattgt taggggatgt tggtatgaca gatattgtat ctaatgacat tttaatggag 3780
gattatgaac gcttgccggg cgtgcctcct gcggaggctg aaattttcca cattataagg 3840
gatgcagcaa aaacgggtca agaggggtgca aaggctagaa ggatagtgga ctttttcgag 3900
tcttctcatg gagttactgc ctctacattt aacgtgggaa cattttcccc ctacgttgag 3960
gggtgtcaagg atatagttag cctgtatgca acgccttgct ttacagacat agattcgcca 4020
acaatatcgg ccgattctgc gacaataaat gaaggcgcaa gcattgaacc aactgatggg 4080
agtgaagttg tgggtggaagt agttaacagc aatatggaaa tgtaggagg aagcactgcc 4140
ggtagtacaa agaagaggag attatctatt tcagattatg tggatttgga agaagatgcg 4200
gaagttttca caatcaataa gcaaggaaag gctacagaaa atctccgcgt tagaacatca 4260
tcatcatcaa agtatgtaga gggaggacaa aaagacatgg tcggtttcta tgaagcgagt 4320
aaaagagtcc ctagagtcac gagaagagtc catgtacttc ctgtattgac accctaccat 4380
ggaggattcg aatcttgccg acctacagct gctcagagt cttgtacaag aggtgtggaa 4440
ataacctatg cagatttcat gagaccttca gatcttagtg gaacaaaaac aacattggag 4500
ggggtaagag ttaaaggccc agaaccattt gatgatcttt caaccctcta ctttagaagc 4560
gtagggggac ctaatctaag gaaatttgca caccatcacc attttgata tgaaggatta 4620
atgagcagat attattatac aagagaaaaa actgtttctg tttcagaggg tgatttgaa 4680
gatagattcc ctttgtttg tcaatcagat agaggaccat tcccaccaa gagggatgga 4740
actatacaac ctttagcact tgtggacatg ggagtgttgc cagaaggcgc actcacaagg 4800
aggacaattt caatggagta a 4821

```

&lt;210&gt; 135

&lt;211&gt; 1600

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 135

```

Met Ser Arg Asn Ser Leu Arg Val Lys Gly Leu Lys Glu Asn Gly Gly
1          5          10          15
Ile Ile Pro Asn Pro Phe Asp Pro Leu Tyr Val Asp Thr Asp Ala Pro
20          25          30
Phe Gly Met Ala Gly Val Lys Ser Asp Ile Ile Gly Lys Gly Phe Val
35          40          45
Glu Ser Leu Leu Pro Gly Glu Ile Ser Ser His Tyr Asn Thr Phe Asp
50          55          60
Cys Phe Lys Thr Pro Lys Lys Cys Arg Val Gly Gly Asn Asp Phe Glu
65          70          75          80
Cys Ile Ser Cys Arg Ser Leu Gly Gly Gly Thr Cys Val Lys Ser Ser
85          90          95
Arg Glu Leu Lys Thr Glu Tyr Gly Ile Glu Asp Asp Asp Glu Tyr Asp
100          105          110

```

Gly	Val	Cys	Val	Pro	Leu	Ala	Asp	Thr	Ile	Phe	Ser	Ala	Ser	Ser	Ala
		115					120					125			
Phe	Asp	Lys	His	Asp	Asp	Asp	Val	Ala	Thr	Asp	Ala	Ala	Tyr	Arg	Asn
		130				135					140				
Val	Asn	Pro	Phe	Thr	Thr	Val	Glu	Glu	Ala	Tyr	Leu	His	Tyr	Glu	Ser
					150					155					160
Gly	Gly	Val	Ile	Thr	Gly	Gly	Gly	Lys	Lys	Gly	Thr	Thr	Tyr	Ile	Thr
				165					170						175
Lys	Lys	Arg	Gly	Cys	Val	Asp	Ser	Ser	Val	Val	Arg	Lys	Asp	Pro	Ser
			180					185					190		
Leu	Leu	Asn	Lys	Asp	Pro	Arg	Leu	Glu	Pro	Ile	Leu	Gly	Cys	Thr	Asp
		195					200					205			
Ile	Val	Leu	Cys	Gly	Gly	Lys	Gly	Val	Gly	Arg	Pro	Ile	His	Pro	Thr
		210				215					220				
Thr	Phe	Ser	Ile	Ile	Asp	Asp	Val	Asp	Asp	Ile	Asp	Phe	Asp	Ile	Ser
					230					235					240
Ser	Met	Thr	Ser	Thr	Met	Asp	Cys	Leu	Cys	Glu	Pro	Gly	Tyr	Ser	Gln
				245				250						255	
Gln	Arg	Asp	Pro	Ala	Thr	Asn	Ala	Pro	Lys	Cys	Glu	Lys	Lys	Glu	Gly
			260					265					270		
Gly	Ile	Gln	Glu	Lys	Glu	Gln	Gly	Leu	Gly	Cys	Pro	Val	Met	Phe	Arg
		275					280					285			
Tyr	Gly	Val	Val	Gly	Asp	Thr	Gly	Thr	Lys	Gly	Cys	Leu	Cys	Asp	Glu
		290				295					300				
Ser	Thr	Gln	Ile	Arg	Leu	Glu	Glu	Val	Ala	Gly	Ile	Asp	Leu	Pro	Asp
		305			310					315					320
Ala	Ala	Lys	Thr	Asp	Tyr	Ala	Gln	Pro	Phe	Val	Glu	Gly	Ala	Lys	Leu
				325					330					335	
Leu	Leu	Gln	Ile	Thr	Glu	Arg	Tyr	Glu	Thr	Leu	Gly	Gly	Ser	Thr	Lys
			340					345					350		
Asp	Ala	Cys	Leu	Pro	Arg	Pro	Gly	Asn	Asp	Thr	Arg	Met	Ser	Ala	Leu
		355					360					365			
Gly	Tyr	Ser	Tyr	Ala	Ala	Ser	Leu	Phe	Gly	Arg	Ala	Pro	Glu	Ile	Thr
		370				375					380				
Ala	Phe	Asn	Gly	Gly	His	Leu	Ile	Thr	Gly	Gly	Leu	Leu	Arg	Glu	Ser
		385			390					395					400
Ala	Met	Asp	Ala	Ala	Gly	Asn	Trp	His	Ser	Arg	Ile	Glu	Asp	Ser	Asp
				405					410					415	
Glu	Gln	Gly	Lys	Leu	Thr	Val	Ser	Glu	Ser	Val	Gly	Gly	Val	Val	Pro
			420					425					430		
Tyr	Ser	Gly	Thr	Gly	Ser	Val	Ala	Ala	His	Ile	Trp	Asn	Gly	Asp	Ala
		435				440						445			
Leu	Asn	Asp	Asn	Gly	Leu	Val	Gly	Ala	Gly	Gly	Gly	Asn	Phe	Thr	Glu
		450				455					460				
His	Pro	Asn	Ala	Ser	Leu	Arg	Val	Val	Pro	Leu	Pro	His	Ser	Asn	Ile
					470					475					480
Pro	Gly	Leu	Gly	Ile	Asp	Ser	Ile	Asp	His	Ala	Val	Gly	Ile	Ile	Ala
				485					490					495	
Ser	Gln	Gly	Lys	Ile	Phe	Pro	Glu	Thr	Val	His	Met	Arg	Ala	Gly	Asp
			500					505					510		
Pro	Ser	Gly	Val	Lys	Thr	Asp	Arg	Arg	Asp	Ala	His	Asn	Asp	Thr	Thr
		515					520					525			
Ile	Glu	Thr	Ser	Phe	Leu	Lys	Asp	Ser	Asp	Lys	Ala	Gly	Tyr	Asp	Ser
		530				535					540				
Tyr	Lys	Asp	Asn	Pro	Leu	Gln	Lys	Leu	Arg	Lys	Ser	His	Asp	Ser	Gly
		545			550					555					560
Ile	Cys	Ala	Thr	Ala	Tyr	Val	Val	Pro	Ser	Leu	His	Arg	Val	Ile	Lys
				565						570				575	
Glu	Lys	Pro	Ser	Ala	Lys	Asn	Asp	Lys	Thr	Val	Asn	Lys	Ile	Leu	Pro
			580					585					590		
Leu	Val	His	Tyr	Arg	Pro	Thr	Ala	Lys	Arg	Met	Ala	His	Thr	Pro	Ile



Phe Asp Lys Ile Gly Glu Leu Gly Glu Lys Glu Asn Cys Asn Cys Thr  
 1090 1095 1100  
 Asn Gly Leu Phe Cys Pro Lys Val Asn Gly Gly Gly Arg Asn Lys Thr  
 1105 1110 1115 1120  
 Asp Pro Ile Ala Ala Thr Pro Ser Arg Gly Asn Arg His Ser Arg Phe  
 1125 1130 1135  
 Pro Leu Met Thr Thr Leu Pro Lys Asn Asp Val His Leu Ser Ala Ala  
 1140 1145 1150  
 Leu Leu Arg Ala Gln Ser Gly Asp Ala Arg Ile Leu Asn Thr Ile Gly  
 1155 1160 1165  
 Glu Thr Lys Thr Asn Gly Arg Lys Ile Asn Leu Lys Ala Ala Thr Glu  
 1170 1175 1180  
 Asn Ile Trp Asp Ile Ser Ser Asn Val Met Leu Ala Pro Asn Lys Phe  
 1185 1190 1195 1200  
 Cys Ala Met Arg Arg Ser Thr Ala Tyr Thr Pro Tyr Ser Thr Arg Gln  
 1205 1210 1215  
 Glu Lys Val Pro Ala Ala Val Leu Asp Glu Arg Lys Gly Thr Phe Asp  
 1220 1225 1230  
 Arg Asn Ala Glu Leu Leu Gly Asp Val Gly Met Thr Asp Ile Val Ser  
 1235 1240 1245  
 Asn Asp Ile Leu Met Glu Asp Tyr Glu Arg Leu Pro Gly Val Pro Pro  
 1250 1255 1260  
 Ala Glu Ala Glu Ile Phe His Ile Ile Arg Asp Ala Ala Lys Thr Gly  
 1265 1270 1275 1280  
 Gln Glu Gly Ala Lys Ala Arg Arg Ile Val Asp Phe Phe Glu Ser Ser  
 1285 1290 1295  
 His Gly Val Thr Ala Ser Thr Phe Asn Val Gly Thr Phe Ser Pro Tyr  
 1300 1305 1310  
 Val Glu Gly Val Lys Asp Ile Val Ser Leu Tyr Ala Thr Pro Cys Phe  
 1315 1320 1325  
 Thr Asp Ile Asp Ser Pro Thr Ile Ser Ala Asp Ser Ala Thr Ile Asn  
 1330 1335 1340  
 Glu Gly Ala Ser Ile Glu Pro Thr Asp Gly Ser Glu Val Val Val Glu  
 1345 1350 1355 1360  
 Val Val Asn Ser Asn Met Glu Met Leu Gly Gly Ser Thr Ala Gly Ser  
 1365 1370 1375  
 Thr Lys Lys Arg Arg Leu Ser Ile Ser Asp Tyr Val Asp Leu Glu Glu  
 1380 1385 1390  
 Asp Ala Glu Val Phe Thr Ile Asn Lys Gln Gly Lys Ala Thr Glu Asn  
 1395 1400 1405  
 Leu Arg Val Arg Thr Ser Ser Ser Ser Lys Tyr Val Glu Gly Gly Gln  
 1410 1415 1420  
 Lys Asp Met Val Gly Phe Tyr Glu Ala Ser Lys Arg Val Pro Arg Val  
 1425 1430 1435 1440  
 Met Arg Arg Val His Val Leu Pro Val Leu Thr Pro Tyr His Gly Gly  
 1445 1450 1455  
 Phe Glu Ser Cys Ala Pro Thr Ala Ala Gln Ser Ala Cys Thr Arg Gly  
 1460 1465 1470  
 Val Glu Ile Thr Tyr Ala Asp Phe Met Arg Pro Ser Asp Leu Ser Gly  
 1475 1480 1485  
 Thr Lys Thr Thr Leu Glu Gly Val Arg Val Lys Gly Pro Glu Pro Phe  
 1490 1495 1500  
 Asp Asp Leu Ser Thr Leu Tyr Phe Arg Ser Val Gly Gly Pro Asn Leu  
 1505 1510 1515 1520  
 Arg Lys Phe Ala His His His His Phe Gly Tyr Glu Gly Leu Met Ser  
 1525 1530 1535  
 Arg Tyr Tyr Tyr Thr Arg Glu Lys Thr Val Ser Val Ser Glu Gly Asp  
 1540 1545 1550  
 Leu Lys Asp Arg Phe Pro Phe Val Cys Gln Ser Asp Arg Gly Pro Phe  
 1555 1560 1565  
 Pro Pro Lys Arg Asp Gly Thr Ile Gln Pro Leu Ala Leu Val Asp Met

1570 1575 1580  
 Gly Val Leu Pro Glu Gly Ala Leu Thr Arg Arg Thr Ile Ser Met Glu  
 1585 1590 1595 1600

<210> 136  
 <211> 3483  
 <212> DNA  
 <213> SHRIMP

<400> 136  
 atgaaaattg tccagaacaa ttttacgccc gatgaaagat ctggtgtgat acacataaga 60  
 aaacctgcga aaatagaaaa agctgtattc gggaatatag cagcggctat cgatgattcc 120  
 gctgctgtta gaaaagaccc gaaaaagaaa aggaacttga agaattgggtt agaaccggcg 180  
 tcaaaaaaac tcgctaataaa tattgaaagg ataccctctg aggaattaaa acgtgtcact 240  
 gatgtgcagg atccaaaatt gttacacagt ataataaaac gcactgcacg gcagatcggt 300  
 tatgatattg gtgatgatat ttctcctcaa tcggctcctg atagagatgg ttcatcatca 360  
 tcatcattgc tgccaattcg aatgattaat atccgtacag aagaattatt agaaaaaggt 420  
 ggaaaaagata ccacgtgtgag gatacatatt cttagcggaa tattaccaga taatgtccct 480  
 cttcccttta aggcagagat aaaagttgat ttagtggatg aaaaatatga aggagaagac 540  
 gggggtggca gcagcgatag tggtcctgct ctattcgaaa ctttccctga atttgcctca 600  
 gcagggtggc ctctatcac caatgacccg aatgcgttct ctgcacaaca tggcaataaa 660  
 caacaagccg tattcaaaac cgtggaagta aattctctag ctgacggtat aacactatca 720  
 acaaagggaa gtattttcaa cactgggaat agactgaaaa tttccattgt aacagaggat 780  
 aaaaacaaga ccgtgttatt cgattctcag gtaacaatat cttcacccat accaaaaata 840  
 acggaagttt ttgctgttag aaatgtagcc ctcatgaggc ttgatatgcc taaagcaata 900  
 aactatgata atgtggaata cactcctgat acattgaatg aaaaatatgt ttcagattac 960  
 cctgctaatt tttccctgct tttccgacaa gctgaaatag cgtccaattt agcagctaaa 1020  
 ctacctcgcg aaaatcaact ttcagatatt aacaaacctt cagtgtcgtt cgtgtactcg 1080  
 aaaacaaaca ctgttaacac accagtatta acaaaagtac tatacaatga aacgttaaag 1140  
 aatatggagg gaaatgaatc cgagggttac aagattctaa acgccacaga gataaccac 1200  
 cttagaatc catctaacc agctcggacc tttatatgtg tgtctgtacc tgaaagtga 1260  
 atagaagcgc attggaatg gttgggctgg atgtgggct tcaaaacgtc gctgacggt 1320  
 ttaaccacat cttctgggta caatattgta tttccagcat caaaagttac tcaatctgat 1380  
 aaattgttct cgtttataag tactgatgtg aatgctaaca cgaacaaagt tgtgtacat 1440  
 aatacacctt cgagagtcgg gtgcttcggg tctagcgtaa acttttagat agatgtcgca 1500  
 actgcaccag attggcctgg acccacgaac gggccagatt tcttctccta ccaactaaga 1560  
 ccatgtatca tcttgaaaac tgataatgat aatagagaac ctgcaataac ggctgtgctt 1620  
 tcttcccccg ctcagaaata tgccgggtgaa cgcacaacat ctctactgcc tctgtcttta 1680  
 aacgtttcag ttggtccatt gactgaagta cgagggtgag atattattac ccccgttcaa 1740  
 actgcattac tgggaggtga acagcctaca ttttaaggcac ccgcagaacc tactaaactg 1800  
 tacgtgtgtt tccctgtttt agattcgcat aacggcctag tgaaagcgag tgataacca 1860  
 ttccaacca ttcacagtat cacgtcaagg aacaaaacta ctgtcttgac cgtatctgat 1920  
 gttatcgtca atgatgatga tgatgatgtt gtcttgaag ataaaagcta ccacatcaca 1980  
 gtctccgata ccgtgtctgg ttctataact gcaaaagaaa acgttctttc ttcgagaata 2040  
 accagccgcc ctatatattat tgacggtgca cgagacgata gggttttcag tgtaaagatg 2100  
 gaagtatttg gaggtgacga taaaggcata cagatgccct ttacgatgga cgggcatttt 2160  
 gaaggacagt tttcagacat gtctgtacca tctaacgaat tggctatatg gaatgatccc 2220  
 tcaaccttta cggcacctgt aagggacaca cccgccaccg acataaccac caagggcata 2280  
 gtctactgtc gcactacact tctctccatt tctaataagag ggataaggga ccctttcatg 2340  
 aaacagacta cctacctaca agctacactg aatgggcatt cgctgattac 2400  
 gggggagaaa taaagtaccc tcggcacatt ttcatcttcc ccataagaac gaatgatact 2460  
 acaaacattg tcaatacaga tactcaaaact gaattttcaa tagaaaactg gttgaggga 2520  
 caaatcgata aggaacaaga acgtcatcga cagttattgc cagcacctag tgaagcgtat 2580  
 acacaggggg agaaagtgtg cgctaaaatg tacatgggag acggcgtttc tgaagaaaca 2640  
 ttagaccaaa ttgtgcacac ttcaaatact acatacgtgg tagacgagtc tggaaacca 2700  
 aaggaaaatc ttctgttaaa taaagaagac aagaaacttg cggctatttt aggaaaatgg 2760  
 ggtattgttg tttttggagc aaataaatac cctgacgaac ctgcagacag atacacgaac 2820  
 tggagaaaca ctggccgcct acgcgcagtg ggttcttatt ctcaattgag acaaccagtt 2880  
 gccctctac agactcggct agccacatgg cctagcggcg accctgttac tcggttagcc 2940  
 gatggacaat ttctggtacg tctagaccct agatgtggag gaattggtag tgcaaacggg 3000

```

ttctacaata ataatggtgc aaacaatgaa tttacttcct cggtactatt tgctatagtt 3060
gggaatcaag acaaggtggt gtcgtatgca gaaagagtaa gattctacat gaaaattgta 3120
gctagaaatg aaggaaagaa gcatttgaaa aatgacgatg gtctagtttt agtggataga 3180
aattcagcac tacatcgccg tctctggaac aggacgacat tcgaccatga tgatattgta 3240
ttatgtgtta aaatccctca aaatgtcatg tctaaaatag aacccggcac tagctcaggt 3300
gtactagtag accctctggt atttgccaat gtagcgtcaa gtacagacag ggaagaattc 3360
tacaagaaat tcatagacac ttcttcaggc cctgttggtta ttgaccgtgc atctgttaca 3420
tcattcttata atatattctgt acccttaaac ttttatacca catgtggatt tatagttggt 3480
taa

```

&lt;210&gt; 137

&lt;211&gt; 1156

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 137

```

Met Lys Ile Val Gln Asn Asn Phe Thr Pro Asp Glu Arg Ser Gly Val
1      5      10      15
Ile His Ile Arg Lys Pro Ala Lys Ile Glu Lys Ala Val Phe Gly Asn
20     25     30
Ile Ala Ala Ala Ile Asp Asp Ser Ala Ala Val Arg Lys Asp Pro Lys
35     40     45
Lys Lys Arg Asn Leu Lys Asn Gly Leu Glu Pro Ala Ser Lys Lys Leu
50     55     60
Ala Lys Asn Ile Glu Arg Ile Ser Ser Glu Glu Leu Lys Arg Val Thr
65     70     75     80
Asp Val Gln Asp Pro Lys Leu Leu His Ser Ile Met Lys Arg Thr Ala
85     90     95
Arg Gln Ile Gly Tyr Asp Ile Gly Asp Asp Ile Ser Pro Gln Ser Ala
100    105    110
Pro Asp Arg Asp Gly Ser Ser Ser Ser Leu Leu Pro Ile Arg Met
115    120    125
Ile Asn Ile Arg Thr Glu Glu Leu Leu Glu Lys Gly Gly Lys Asp Thr
130    135    140
Ile Val Arg Ile His Ile Leu Asp Gly Ile Leu Pro Asp Asn Val Pro
145    150    155    160
Leu Pro Phe Lys Ala Glu Ile Lys Val Asp Leu Val Asp Glu Lys Tyr
165    170    175
Glu Gly Glu Asp Gly Gly Gly Ser Ser Asp Ser Gly Pro Ser Leu Phe
180    185    190
Glu Thr Phe Pro Glu Phe Val Pro Ala Gly Trp Pro Pro Ile Thr Asn
195    200    205
Asp Pro Asn Ala Phe Ser Arg Asn Asn Gly Asn Lys Gln Gln Ala Val
210    215    220
Phe Lys His Val Glu Val Asn Ser Leu Ala Asp Gly Ile Thr Leu Ser
225    230    235    240
Thr Lys Gly Ser Ile Phe Asn Thr Gly Asn Arg Leu Lys Ile Ser Ile
245    250    255
Val Thr Glu Asp Lys Asn Lys Thr Val Leu Phe Asp Ser Gln Val Thr
260    265    270
Ile Ser Ser Pro Ile Pro Lys Ile Thr Glu Val Phe Ala Cys Arg Asn
275    280    285
Val Met Arg Leu Asp Met Pro Lys Ala Ile Asn Tyr Asp Asn Val Glu
290    295    300
Tyr Thr Pro Asp Thr Leu Asn Glu Lys Tyr Val Ser Asp Tyr Pro Ala
305    310    315    320
Asn Phe Pro Arg Leu Ser Arg Gln Ala Glu Ile Asn Leu Ala Ala Lys
325    330    335
Leu Pro Arg Glu Asn Gln Leu Ser Asp Ile Asn Lys Pro Ser Val Ser
340    345    350
Phe Val Tyr Ser Lys Thr Asn Thr Val Asn Thr Pro Val Leu Asn Lys

```



		355					360					365			
Val	Leu	Tyr	Asn	Glu	Thr	Leu	Lys	Asn	Met	Glu	Gly	Asn	Glu	Ser	Glu
	370					375					380				
Gly	Tyr	Lys	Ile	Leu	Asn	Ala	Thr	Glu	Ile	Thr	His	Leu	Arg	Asn	Pro
385					390					395					400
Ser	Asn	Pro	Ala	Arg	Thr	Phe	Ile	Cys	Val	Ser	Val	Pro	Glu	Ser	Glu
				405					410					415	
Ile	Glu	Ala	Gln	Trp	Lys	Met	Leu	Gly	Trp	Ile	Val	Gly	Phe	Lys	Thr
			420					425					430		
Ser	Ser	Asp	Val	Leu	Thr	Thr	Ser	Ser	Gly	Tyr	Asn	Ile	Val	Phe	Pro
		435					440					445			
Ala	Ser	Lys	Val	Thr	Gln	Ser	Asp	Lys	Leu	Phe	Ser	Val	Ile	Ser	Thr
		450					455					460			
Asp	Val	Asn	Ala	Asn	Thr	Asn	Lys	Val	Val	Val	His	Asn	Thr	Pro	Ser
465					470					475					480
Arg	Val	Gly	Cys	Phe	Gly	Ser	Ser	Val	Asn	Phe	Arg	Val	Asp	Ala	Ala
				485					490					495	
Thr	Ala	Pro	Asp	Trp	Pro	Gly	Pro	Thr	Asn	Gly	Pro	Asp	Phe	Phe	Ser
			500					505					510		
Tyr	Gln	Leu	Arg	Pro	Cys	Ile	Ile	Leu	Lys	Thr	Asp	Asn	Asp	Asn	Arg
		515					520					525			
Glu	Pro	Arg	Ile	Thr	Ala	Val	Leu	Ser	Ser	Pro	Ala	Thr	Glu	Tyr	Ala
	530					535					540				
Gly	Glu	Arg	Thr	Thr	Ser	Leu	Leu	Pro	Arg	Ala	Leu	Asn	Val	Ser	Val
545					550					555					560
Gly	Pro	Leu	Thr	Glu	Val	Arg	Gly	Gly	Asp	Ile	Ile	Thr	Pro	Val	Gln
				565					570					575	
Thr	Ala	Leu	Leu	Gly	Gly	Glu	Gln	Pro	Thr	Phe	Lys	Ala	Pro	Ala	Glu
			580					585					590		
Pro	Thr	Lys	Leu	Tyr	Ala	Val	Phe	Pro	Val	Leu	Asp	Ser	His	Asn	Gly
		595					600					605			
Leu	Val	Lys	Ala	Ser	Asp	Asn	Pro	Phe	Gln	Pro	Ile	His	Ser	Ile	Thr
	610					615					620				
Ser	Arg	Asn	Lys	Thr	Thr	Val	Leu	Thr	Val	Ser	Asp	Val	Ile	Val	Asn
625					630					635					640
Asp	Asp	Asp	Asp	Asp	Val	Val	Leu	Glu	Asp	Lys	Ser	Tyr	His	Ile	Thr
				645					650					655	
Val	Ser	Asp	Pro	Val	Ser	Gly	Ser	Ile	Leu	Ala	Lys	Glu	Asn	Val	Leu
			660					665					670		
Ser	Ser	Arg	Ile	Thr	Ser	Arg	Pro	Ile	Phe	Ile	Asp	Gly	Ala	Arg	Asp
		675					680					685			
Asp	Arg	Val	Phe	Ser	Val	Lys	Met	Glu	Val	Phe	Gly	Gly	Asp	Asp	Lys
	690					695					700				
Gly	Ile	Gln	Met	Pro	Phe	Thr	Met	Asp	Gly	His	Phe	Glu	Gly	Gln	Phe
705					710					715					720
Ser	Asp	Met	Ser	Val	Pro	Ser	Asn	Glu	Leu	Ala	Ile	Trp	Asn	Asp	Pro
				725					730					735	
Ser	Thr	Phe	Thr	Ala	Pro	Val	Arg	Asp	Thr	Pro	Ala	Thr	Asp	Ile	Thr
			740					745					750		
Asn	Lys	Gly	Ile	Val	Tyr	Cys	Arg	Thr	Thr	Leu	Pro	Pro	Ile	Ser	Asn
		755					760					765			
Arg	Gly	Ile	Arg	Asp	Pro	Phe	Met	Lys	Gln	Thr	Ser	Leu	Val	Pro	Leu
	770					775					780				
Pro	Thr	Ser	Ile	Pro	Glu	Trp	Ala	Phe	Ala	Asp	Tyr	Gly	Gly	Glu	Ile
785					790					795					800
Lys	Tyr	Pro	Arg	His	Ile	Phe	Ile	Ser	Ser	Ile	Arg	Thr	Asn	Asp	Thr
				805					810					815	
Thr	Asn	Ile	Val	Asn	Thr	Asp	Thr	Gln	Thr	Glu	Phe	Ser	Ile	Glu	Asn
			820					825					830		
Trp	Leu	Arg	Glu	Gln	Ile	Asp	Lys	Glu	Gln	Glu	Arg	His	Arg	Gln	Leu
		835					840					845			



<211> 204  
 <212> PRT  
 <213> SHRIMP

<400> 139

Met	Glu	Phe	Gly	Asn	Leu	Thr	Asn	Leu	Asp	Val	Ala	Ile	Ile	Ala	Ile
1				5				10					15		
Leu	Ser	Ile	Ala	Ile	Ile	Ala	Leu	Ile	Val	Ile	Met	Val	Ile	Met	Ile
			20					25					30		
Val	Phe	Asn	Thr	Arg	Val	Gly	Arg	Ser	Val	Val	Ala	Asn	Tyr	Asp	Gln
		35					40					45			
Met	Met	Arg	Val	Pro	Ile	Gln	Arg	Arg	Ala	Lys	Val	Met	Ser	Ile	Arg
	50					55					60				
Gly	Glu	Arg	Ser	Tyr	Asn	Thr	Pro	Leu	Gly	Lys	Val	Ala	Met	Lys	Asn
65					70					75					80
Gly	Leu	Ser	Asp	Lys	Asp	Met	Lys	Asp	Val	Ser	Ala	Asp	Leu	Val	Ile
				85					90					95	
Ser	Thr	Val	Thr	Ala	Pro	Arg	Thr	Asp	Pro	Ala	Gly	Thr	Gly	Ala	Glu
			100					105					110		
Asn	Ser	Asn	Met	Thr	Leu	Lys	Ile	Leu	Asn	Asn	Thr	Gly	Val	Asp	Leu
		115					120					125			
Leu	Ile	Asn	Asp	Ile	Thr	Val	Arg	Pro	Thr	Val	Ile	Ala	Gly	Asn	Ile
	130					135					140				
Lys	Gly	Asn	Thr	Met	Ser	Asn	Thr	Tyr	Phe	Ser	Ser	Lys	Asp	Ile	Lys
145					150					155					160
Ser	Ser	Ser	Ser	Lys	Ile	Thr	Leu	Ile	Asp	Val	Cys	Ser	Lys	Phe	Glu
				165					170					175	
Asp	Gly	Ala	Ala	Phe	Glu	Ala	Thr	Met	Asn	Ile	Gly	Phe	Thr	Ser	Lys
			180					185					190		
Asn	Val	Ile	Asp	Ile	Lys	Asp	Glu	Ile	Lys	Lys	Lys				
		195					200								

<210> 140  
 <211> 2571  
 <212> DNA  
 <213> SHRIMP

<400> 140

atgacagagt	caaaggacta	tgttctggca	ttagtagcag	aaactaaaac	cgatgaaaaa	60
cgactaaatt	atgtatcgga	agggctagtt	gctgccattt	caaatttaca	aaatacacct	120
gaaaaacaaa	ggaagggtgt	tattttcttct	gacgtattcg	gacccacgtg	gttcaataaa	180
acgacagaat	tttttaattc	gggactaaga	ttagccaaag	gacacctatc	taaagatgcc	240
gtcatgagga	gtgtctacag	agatatagaa	ggtgttagag	agcatataat	tgacccctct	300
tggagattga	ccgaaactgc	agcggaagaa	ctatgtgact	ttactttttt	gaaacaagca	360
ccattattga	accttttgaa	tgcctttgag	aatattatgg	acggtgtggt	tagatcagca	420
gctaattctag	ttctttattc	cactagaggt	gatactaatt	aaccttcatg	ggtaattgat	480
tcagaaatgt	tggccaacag	aaacaattca	acggtggccg	atctggcaat	gggacgagca	540
aaaagagcca	ttgctctatt	tctaggatat	actctttgtg	atatttctaag	atggaagcaa	600
tctatcgctt	ctagaatgaa	agagaggggt	ttagatccct	ttgctgccat	gcctctctac	660
ctagagtacg	gacgcgtgct	tgacatgatt	gaaaaaagga	taaaagactt	tattgaaggg	720
tccttttagtg	atggagttac	agtcagtga	gaagatggac	aatcttatgt	tgttccaact	780
atatcgactg	ttttaaccaa	catggtttct	gtaatacagg	aaggattcta	ccccccaag	840
gtaggttctt	tccatgaagc	tcttttaggg	agggaaatca	tggtactatt	atcagcagcc	900
atcgacgcag	agtacagggc	agtgtgtgcc	aggaccagaa	acgctaaacc	aaatcctttg	960
acaataaact	tggataaata	tgtgaacaat	ccccatctgc	agatgccatc	cgaaagtgtc	1020
acagaaaagg	aaaaagaatg	ggtcgagagg	gaaagagaac	gaattaaaac	tacggatatg	1080
actgctgaga	atctctttag	ggaccaccca	tatcttccaa	aggcgataga	cggaatttta	1140
gggcctaaac	gcacacctac	cgcccttcaa	gctcttcaac	gtgaatacaa	gagatgtaac	1200
aagtttaacg	atattgtttc	accagaaact	ttggagtatt	ttcttgtcaa	taatagacaa	1260
gttatgttct	ccaactactc	tgttaccgcg	gttcttgatc	ccgactcagc	tgcccgatct	1320



			260					265					270		
Gly	Phe	Tyr	Pro	Pro	Lys	Val	Gly	Ser	Phe	His	Glu	Ala	Leu	Leu	Gly
		275					280					285			
Arg	Glu	Ile	Met	Val	Leu	Leu	Ser	Ala	Ala	Ile	Asp	Ala	Glu	Tyr	Arg
	290					295					300				
Ala	Val	Leu	Ser	Arg	Thr	Arg	Asn	Ala	Lys	Pro	Asn	Pro	Leu	Thr	Thr
305					310					315					320
Lys	Leu	Asp	Lys	Tyr	Val	Asn	Asn	Pro	His	Leu	Gln	Met	Pro	Ser	Glu
				325					330					335	
Ser	Val	Thr	Glu	Arg	Glu	Lys	Glu	Trp	Val	Glu	Arg	Glu	Arg	Glu	Arg
			340					345					350		
Ile	Lys	Thr	Thr	Asp	Met	Thr	Ala	Glu	Asn	Leu	Phe	Arg	Asp	His	Pro
		355					360					365			
Tyr	Leu	Pro	Lys	Ala	Ile	Asp	Gly	Ile	Leu	Gly	Pro	Lys	Arg	Thr	Pro
	370					375					380				
Thr	Ala	Leu	Gln	Ala	Leu	Gln	Arg	Glu	Tyr	Lys	Arg	Cys	Asn	Lys	Phe
385					390					395					400
Asn	Asp	Ile	Val	Ser	Pro	Glu	Thr	Leu	Glu	Tyr	Phe	Leu	Val	Asn	Asn
				405					410					415	
Arg	Gln	Val	Met	Phe	Ser	Asn	Tyr	Ser	Val	Thr	Arg	Val	Leu	Asp	Pro
			420					425					430		
Asp	Ser	Ala	Ala	Arg	Phe	Ser	Met	Tyr	Val	Leu	Trp	Asn	Ala	Leu	Phe
		435					440					445			
Leu	Cys	Ser	Gly	Gly	Leu	Thr	Gln	Lys	Thr	Asn	Ser	Ser	Ala	Val	Lys
	450					455					460				
Ser	Arg	Leu	Ile	Leu	Gln	Val	Phe	Leu	Lys	Asp	Met	His	Ser	Leu	Phe
465					470					475					480
Val	Cys	Gln	Arg	Cys	Glu	Ser	Gly	Phe	Ile	Thr	Lys	Ser	Leu	Asp	Thr
				485					490					495	
Phe	Thr	Ile	Ser	Leu	Lys	Glu	Gln	Ser	Lys	Pro	Ser	Met	Gly	Glu	Gln
			500					505					510		
Glu	Leu	Glu	Thr	Tyr	Trp	Lys	Ala	Val	Leu	Asp	Ala	Leu	Gly	Gly	Gly
		515					520					525			
Gly	Gly	Asn	Asn	Lys	Gly	Ala	Glu	Asn	Val	Asn	Gly	Leu	Gly	Glu	Leu
	530					535					540				
Met	Val	Glu	Ile	Leu	Ser	Ala	Asp	Ser	Gly	Leu	Leu	Arg	Gly	Gly	Gly
545					550					555					560
Leu	Gly	Gly	Asp	Ile	Gly	Phe	Glu	Gly	Lys	Met	Lys	Gln	Lys	Arg	Glu
				565					570					575	
Asp	Glu	Glu	Val	Arg	Asn	Met	His	Leu	Val	Asp	Lys	Lys	Gly	Tyr	Val
			580					585					590		
Phe	Glu	Ala	Ala	Lys	Tyr	Val	His	Val	Ser	Lys	Gly	Phe	Ala	Ala	Leu
		595					600					605			
Ser	Phe	Tyr	Leu	Leu	Tyr	Ala	Ala	Ala	Ala	Thr	Ser	Asn	Pro	Ser	Ile
	610														

WO 01/38351

PCT/US00/28888

226

Lys Lys Ala Lys Gln Asp Leu Ile Arg Asn Ala Ser Ile Gly Arg Leu  
 755 760 765  
 Ile Val Glu Pro Val Gly Lys Thr Pro Ile Ser Ser Ile Ala Leu Phe  
 770 775 780  
 Arg Ser Met Lys Arg Ser Arg Ser Glu Asp Leu Lys Met Gly Ser Asn  
 785 790 795 800  
 Asn Lys Tyr Arg Leu Ala Arg Asp Thr Lys Thr Ala Thr Pro Arg Asn  
 805 810 815  
 Pro Leu Ser Tyr Thr Gly Lys Ile Val Phe Ser Leu Asp Asp Leu Lys  
 820 825 830  
 Asn Phe Ser Lys Asp Ser Tyr Thr Thr Met Lys Val Phe Pro Leu Thr  
 835 840 845  
 Pro Leu Asp Gly  
 850

<210> 142  
 <211> 591  
 <212> DNA  
 <213> SHRIMP

<400> 142  
 atggacgttt cttcctataa gagcactatt gactaccaca acattgaaga tatggacgat 60  
 ctccagcgcg ccacctacaa ggatcgatg gagacggaat tggtcctcga gatggctaag 120  
 aaggagggaa ggtacgtccg atcgttggcc accatggacg aattggaggt acctgaagaa 180  
 ccagccactt gctacacttg cggctacacc tttattagac gcagggcacc cccacaaaa 240  
 cgcaagtcaa tattcagaga gccttgcgct taccagaac ttctccccga tgcaccatcc 300  
 ccggtccgtt tagaagagct gtgcgacgtg ccagaaggag cgagtgtttt cacctaccct 360  
 ccctacgacg acggatcttc tacatcgtct tcacaagccg aatgtgaaga tgattatcct 420  
 ccaccatacg acccatcaga aaatccacag aggtcccaag tgtgtgatta ttgtaccaca 480  
 cgtcaagtcc tcagttctat gacggatcac gccagggcca acctcataaa aaatctgaag 540  
 agggagaaga aggccttggg tcttggccgt cgcaacaact ttagctacta g 591

<210> 143  
 <211> 194  
 <212> PRT  
 <213> SHRIMP

<400> 143  
 Met Asp Val Ser Ser Tyr Lys Ser Thr Ile Asp Tyr His Asn Ile Glu  
 1 5 10 15  
 Asp Met Asp Asp Leu Gln Arg Ala Thr Tyr Lys Asp Arg Met Glu Leu  
 20 25 30  
 Val Leu Glu Met Ala Lys Lys Glu Gly Arg Tyr Val Arg Ser Leu Ala  
 35 40 45  
 Thr Met Asp Glu Leu Glu Val Pro Glu Glu Pro Ala Thr Cys Tyr Thr  
 50 55 60  
 Cys Gly Tyr Thr Phe Ile Arg Arg Arg Ala Pro Pro Pro Lys Arg Lys  
 65 70 75 80  
 Ser Ile Phe Arg Glu Pro Cys Ala Tyr Pro Glu Leu Leu Pro Asp Ala  
 85 90 95  
 Pro Ser Pro Val Arg Leu Glu Glu Leu Val Asp Val Pro Glu Gly Ala  
 100 105 110  
 Ser Phe Phe Thr Tyr Pro Pro Tyr Asp Asp Gly Ser Ser Thr Ser Ser  
 115 120 125  
 Ser Gln Ala Glu Cys Glu Asp Tyr Pro Pro Pro Tyr Asp Pro Ser  
 130 135 140  
 Glu Asn Pro Gln Arg Ser Gln Val Cys Asp Tyr Cys Thr Thr Arg Gln  
 145 150 155 160  
 Val Leu Ser Ser Met Thr Asp His Ala Arg Ala Asn Leu Ile Lys Asn  
 165 170 175

WO 01/38351

PCT/US00/28888

227

Leu Lys Arg Glu Lys Lys Ala Leu Gly Leu Gly Arg Arg Asn Asn Phe  
 180 185 190  
 Ser Tyr

<210> 144  
 <211> 627  
 <212> DNA  
 <213> SHRIMP

<400> 144  
 atggccccc aaactccttcca gaaatttgct ccagtttatca agactgagaa gaaggaagaa 60  
 gaaagggatg aacatgacga cccttttacgg cagattgatt ttagagatag aaagacatta 120  
 atctgcctca ctgcaaaactg tgtttcgagg aagagaaaag ctggatctgc acatgatcga 180  
 gtatacaaa g tactacgcta cgggaaccca tacaagtacc gtcgccccaa tagaacacat 240  
 cgaggattgg ccctctcaat ggatcaaggt gaagtaggaa catgcctccc tctgcgaccc 300  
 atggaagaga ctgaagaaaa ccccatcgac aagtgcggag tggcgttcct gtactccaac 360  
 tacaatgaag gcgatggcat gaccacacctt tacaacgacg aagagtatat aaagaagtgc 420  
 aaacaattg aaggaggaac aagaacgtgg gtaagaaga accgccaaga atacttcaga 480  
 caagctctag agacattgat gatgtcccat tctataaaac aatattccaa ttttattttt 540  
 ttcaaggagg atatggagga aggatttggtg cacaaactcc acacatttat taatatggtta 600  
 caccctaaaa aggtgtctgt tttgtga 627

<210> 145  
 <211> 204  
 <212> PRT  
 <213> SHRIMP

<400> 145  
 Met Ala Pro Asn Ser Phe Gln Lys Phe Ala Pro Val Ile Lys Thr Glu  
 1 5 10 15  
 Lys Lys Glu Glu Glu Arg Asp Glu His Asp Asp Pro Leu Arg Gln Ile  
 20 25 30  
 Asp Phe Arg Asp Arg Lys Thr Leu Ile Cys Leu Thr Ala Asn Cys Val  
 35 40 45  
 Ser Arg Lys Arg Lys Ala Gly Ser Ala His Asp Arg Val Tyr Lys Val  
 50 55 60  
 Leu Arg Tyr Gly Asn Pro Tyr Lys Tyr Arg Arg Pro Asn Arg Thr Gly  
 65 70 75 80  
 Leu Ala Leu Ser Met Asp Gln Gly Glu Val Gly Thr Cys Leu Pro Leu  
 85 90 95  
 Arg Pro Met Glu Glu Thr Glu Glu Asn Pro Ile Asp Lys Cys Gly Val  
 100 105 110  
 Ala Phe Lys Asn Tyr Asn Glu Gly Asp Gly Met Thr His Leu Tyr Asn  
 115 120 125  
 Asp Glu Glu Tyr Ile Lys Lys Cys Lys Thr Ile Glu Gly Gly Thr Arg  
 130 135 140  
 Thr Trp Val Lys Lys Asn Arg Gln Glu Tyr Phe Arg Gln Ala Leu Glu  
 145 150 155 160  
 Thr Leu Met Met Ser His Ser Ile Lys Gln Tyr Ser Asn Phe Ile Phe  
 165 170 175  
 Phe Lys Glu Asp Met Glu Glu Gly Phe Val His Lys Leu His Thr Phe  
 180 185 190  
 Ile Asn Met Val His Pro Lys Lys Val Ser Val Leu  
 195 200

<210> 146  
 <211> 870  
 <212> DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 146

```

atggaggagg aacatcaata tttgaaccta gtcagggaga tcctagaaag aggagtgaag 60
aaggacgata gaactggaac aggaactcta tccatttttg gaccccaaag gaggttctct 120
cttcgagacg acactattcc agttctcact accaagaaaa ttttctggag aggagtgtgtg 180
gaagaactct tgtggttcat caggggcaat acagacgcca aagaattggc caagaagaag 240
atacacatct ggaacgctaa tgggtcgcgg gaatttttgg acagtagagg gttatacgat 300
agagcagagg gagatttggg acccgatac ggattccaat ggcgtcattt tggtgctgaa 360
tatgatacct gttcttccga ttatactgga aagggtattg atcaattggc caatatacta 420
aagaccctga gagaaaatcc agatgataga aggatgatta tgacggcatg gaatcctatg 480
gatcttcacc ttatggctct tcctccatgc cacatgactg ctcaatttta tgtggctaata 540
ggagaattgt cgtgccagtt gtatcagcga agcggagatg tcgggttggg cgtgcccttc 600
aatattgcat catactctct tctgactcat ctgatggcca gtatgggtggg tctaaaaccg 660
ggagagttta tcctcactct tggtagcga cacatttata ataccacat tgagggtgta 720
aagaagcagt tgtgccgcgt ccctagacca ttccctaagt tgaggatttt aatggctcca 780
gaaaaaattg aggactttac tatcgacatg ttttatcttg aggggtatca accacacagt 840
ggaaacttgc agatgaaaat ggctgtttga 870

```

&lt;210&gt; 147

&lt;211&gt; 285

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 147

```

Met Glu Gly Glu His Gln Tyr Leu Asn Leu Val Arg Glu Ile Arg Gly
1          5          10          15
Val Lys Lys Asp Asp Arg Thr Gly Thr Gly Thr Leu Ser Ile Phe Gly
20          25          30
Pro Gln Met Arg Phe Ser Leu Arg Asp Asp Thr Ile Pro Val Leu Thr
35          40          45
Thr Lys Lys Ile Phe Trp Arg Gly Val Val Glu Glu Leu Leu Trp Phe
50          55          60
Ile Arg Gly Asn Thr Asp Ala Lys Glu Leu Ala Lys Lys Lys Ile His
65          70          75          80
Ile Trp Asn Ala Asn Gly Ser Arg Glu Phe Leu Asp Ser Arg Gly Asp
85          90          95
Arg Ala Glu Gly Asp Leu Gly Pro Val Tyr Gly Phe Gln Trp Arg His
100          105          110
Phe Gly Ala Glu Tyr Asp Thr Cys Ser Ser Asp Tyr Thr Gly Lys Gly
115          120          125
Ile Asp Gln Leu Ala Asn Ile Leu Lys Thr Leu Arg Glu Asn Pro Asp
130          135          140
Asp Arg Arg Met Ile Met Thr Ala Trp Asn Pro Met Asp Leu His Leu
145          150          155          160
Met Ala Leu Pro Pro Cys His Met Thr Ala Gln Phe Tyr Val Ala Asn
165          170          175          180
Gly Glu Leu Ser Cys Gln Leu Tyr Gln Arg Ser Gly Asp Val Gly Leu
180          185          190
Gly Val Pro Phe Asn Ile Ala Ser Tyr Ser Leu Leu Thr His Leu Met
195          200          205
Ala Ser Met Val Gly Leu Lys Pro Gly Glu Phe Ile Leu Thr Leu Gly
210          215          220
Asp Ala His Ile Tyr Asn Thr His Ile Glu Val Leu Lys Lys Gln Leu
225          230          235          240
Cys Arg Val Pro Arg Pro Phe Pro Lys Leu Arg Ile Leu Met Ala Pro
245          250          255
Glu Lys Ile Glu Asp Phe Thr Ile Asp Met Phe Tyr Leu Glu Gly Tyr
260          265          270
Gln Pro His Ser Gly Asn Leu Gln Met Lys Met Ala Val
275          280          285

```



WO 01/38351

229

PCT/US00/28888

<210> 148  
 <211> 678  
 <212> DNA  
 <213> SHRIMP

<400> 148  
 atggccttta attttgaaga ctctacaaat ctctttgcca atatggactt gacggctggc 60  
 acaacaacag accctacccg cccaatatc atattctttg aaagtctact cccaactct 120  
 ggtattgagg tgatgaagag gcgtctcgta cggcaaggaa agtgtgggaa ttttgaagca 180  
 agtggaggtg ctatgtcgta tttctggctc gaagataatg cagaagatat ggagaatctc 240  
 aacagtgggt cccatgtcaa gacaaactgc ttggcattat tccttcaaga gtttatcagc 300  
 aactggattg aagagactga tcgacatgga cagtactgta cttttcccca atacatggac 360  
 ggtggggatg gttcacgtgg gggatatttt acttcgctag ccatgaaatg gatggctagg 420  
 gatgtgactt tctttgtgtt tgttgatagg aataatactg tagaaaatgc ggcatccata 480  
 tggatgtacc aaaaactact agcaattggg gcaaaggtag taaaggatgat tgttgacaat 540  
 gcatcaaacc caatgttttc tgtatgtaat gcgtgtaggt gcaagtaccc aggcccagtg 600  
 tcatacgtta ttgaaggcca tggagtgggt cattctgatt tgacatgtga tgagatttct 660  
 ggattccttg tataataa 678

<210> 149  
 <211> 220  
 <212> PRT  
 <213> SHRIMP

<400> 149  
 Met Ala Phe Asn Phe Glu Asp Ser Thr Asn Leu Phe Ala Asn Met Asp  
 1 5 10 15  
 Leu Thr Ala Gly Thr Thr Thr Asp Pro Trp Asn Ile Ile Phe Phe Glu  
 20 25 30  
 Ser Leu Leu Pro Asn Ser Gly Ile Glu Val Met Lys Arg Arg Leu Val  
 35 40 45  
 Arg Gln Gly Lys Cys Gly Asn Phe Glu Ala Ser Gly Gly Ala Met Ser  
 50 55 60  
 Tyr Phe Trp Leu Glu Asp Asn Ala Glu Asp Met Glu Asn Leu Asn Ser  
 65 70 75 80  
 Gly Ser His Val Lys Thr Asn Cys Leu Ala Leu Phe Leu Gln Glu Phe  
 85 90 95  
 Ile Ser Asn Trp Ile Glu Glu Thr Asp Arg His Gly Gln Tyr Cys Thr  
 100 105 110  
 Phe Pro Gln Tyr Met Asp Gly Gly Asp Gly Ser Arg Gly Gly Tyr Phe  
 115 120 125  
 Thr Ser Leu Ala Met Lys Trp Met Ala Arg Asp Val Thr Phe Phe Val  
 130 135 140  
 Phe Val Asp Arg Asn Asn Thr Val Glu Asn Ala Ala Ser Ile Trp Met  
 145 150 155 160  
 Tyr Gln Lys Leu Leu Ala Ile Gly Ala Lys Val Val Lys Val Ile Val  
 165 170 175  
 Asp Asn Asn Pro Met Phe Ser Val Cys Asn Ala Cys Arg Cys Lys Tyr  
 180 185 190  
 Pro Gly Pro Val Ser Tyr Val Ile Glu Gly His Gly Val Gly His Ser  
 195 200 205  
 Asp Leu Thr Cys Asp Glu Ile Ser Gly Phe Phe Val  
 210 215 220

<210> 150  
 <211> 1269  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 150

```

atggattcta atacttctat tttaccgcca agcaaacggc caggggttaaa tctgtttacag 60
gttttaggga ttataataac ggtagcatta atagcttccg tttcatcctt tatattttat 120
agggttaggta aacgcaaata ttacccttct tcatcctctt cctcagaatt atctgatgta 180
gataatgggg tagaaggagg aggaggaaca acaacgacac caactcaacc ttcacctgac 240
ggtggagatg gatacgtaga tctttctcct caaaagaagg ctgaactaag aactagagtt 300
gcaaacgtca tctttcaaga agtgtcaaag gatcaaggag tggcctttag acgggcaatg 360
aatgattcaa ctgataagat aatggaagaa actgaggcga gaatcaataa cttttcagag 420
ccattcagag aagcaaccgt agaacgtgaa gtgtttaagg atgacacaga caaaaacttt 480
atcctttcaa ctctagattt aacagaggaa caatttaagg acattgttat ggctgaagtg 540
aaaaatcaat tagaaaattt tgactatgaa gacatgaccc gtctcatctt tgataacatc 600
ccagagactg attatttatg gacaactcat ttcgatccga aaaaatatga cacgtactct 660
gaaaagggtat tagggttctc agatataaat agtatagaaa gaatatcctc tacattttat 720
aaaggtaaaa aatatgaggt aactactgga aatgtagctg tcctcgttga ttttgaatct 780
gaaacaataa aagagaaggc aggaaatagt ctcatccgta atgtcgagtt tattgttgtg 840
gacgaacaga cctacaaatc tttcttcctt gcattcaatc aagttttctt ctccttttaa 900
gtaaataagg agaaaaggga agttactgta tccatcaata atggatgtgt aggtatagtg 960
gccaatatta ctccctctaac tacgccagtt ggagcagctt ccggacacta catctatggc 1020
actagcacag caaaggaaaa gacctatcta tttgtaatat acaagtacga taccactgaa 1080
tttgtttgtg gtcctgagtaa caagtcaact cctctcatgg ctctaaatat tctctttatg 1140
agtgatactg ttttcccttc atttgacgaa gcagaaagac ctctgacgga tgccaaggca 1200
gtagaaattt taggtaaaag actaggtgta ggaagataca caaacgcaa catcagaaat 1260
actcagta 1269

```

&lt;210&gt; 151

&lt;211&gt; 418

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 151

```

Met Asp Ser Asn Thr Ser Ile Leu Pro Pro Ser Lys Arg Pro Gln Leu
1      5      10      15
Leu Gln Val Leu Gly Ile Ile Ile Thr Val Ile Ala Ser Val Ser Ser
20     25     30
Phe Ile Phe Tyr Arg Val Gly Lys Arg Lys Tyr Tyr Pro Ser Ser Ser
35     40     45
Ser Ser Ser Glu Leu Ser Asp Val Asp Asn Gly Val Glu Gly Gly Gly
50     55     60
Gly Thr Thr Thr Thr Pro Thr Gln Pro Ser Pro Asp Gly Gly Asp Gly
65     70     75     80
Tyr Val Asp Leu Ser Pro Gln Lys Lys Ala Glu Leu Arg Thr Arg Val
85     90     95
Ala Asn Val Ile Phe Gln Glu Val Ser Lys Asp Gln Gly Val Ala Phe
100    105    110
Arg Arg Ala Met Asn Asp Ser Thr Asp Lys Ile Met Glu Glu Thr Glu
115    120    125
Ala Arg Ile Asn Asn Phe Ser Glu Pro Phe Arg Glu Ala Thr Val Glu
130    135    140
Arg Glu Val Phe Lys Asp Asp Thr Asp Lys Asn Phe Ile Leu Ser Thr
145    150    155    160
Leu Asp Leu Thr Glu Glu Gln Phe Lys Asp Ile Val Met Ala Glu Val
165    170    175
Lys Asn Gln Leu Glu Asn Phe Asp Tyr Glu Asp Met Thr Arg Leu Ile
180    185    190
Phe Asp Asn Ile Pro Glu Thr Asp Tyr Leu Trp Thr Thr His Phe Asp
195    200    205
Pro Lys Lys Tyr Asp Thr Tyr Ser Glu Lys Val Leu Gly Phe Ser Asp
210    215    220
Ile Asn Ser Ile Glu Arg Ile Ser Ser Thr Phe Tyr Lys Gly Lys Lys
225    230    235    240

```

[illegible]

<210>	152
<211>	831
<212>	DNA
<213>	SHRIMP

<400> 152						
atggaagggg	ttatttttga	taagatagaa	acaattgcaa	aaagggcctc	tcctagttat	60
gggtctattg	atgtgggtac	ggctattttg	cgccgtcaat	tcatggaaaa	aattaggggt	120
aaaataattg	agaaaccac	aatggagaag	attatgggca	caaaggaaga	aagaggagac	180
actataagaa	gtatagtggc	taatgtttatc	aaagagaata	ctgttaaaga	aaatgtaacc	240
gaaaaaatta	gagcaatgac	agataaggaa	ttaaatgaca	atagggaatt	tatgcatgat	300
tttgaaaaaa	tttcaactgg	agatggagga	accttccatc	tctttgaaga	tacaccgggt	360
tttgaaaagt	ctttaaaggc	agaatataaa	aacgttccag	gagcaactac	tccaaaatac	420
gtactatga	acagtttacg	tatcgatgcg	atgaattgaa	aaatcgaaga	ggtttataat	480
ctctcaccta	tcattgggtat	tagagaatac	ggcaccattc	cgaggggcag	gtacgaagaa	540
aatgcagggt	cgaagaatt	ggtttttatg	accaagattg	aaaaaagacc	caataatgta	600
gctgaaaatc	tcattattag	agttgccaac	cagcagtata	atgtttatgag	gatggtgttt	660
ttttatagct	acgaaacaaa	gaaggggggtg	tccaaggagg	aaatgtttat	accatataat	720
cttcagaaaa	caaaggctct	taaagggcgt	agtaacttact	tttcatctgt	aaggaaaatt	780
cctgatgaac	cagaaggggag	tatcataata	cacgcactag	ggtttttattg	a	831

```
<210> 153
<211> 274
<212> PRT
<213> SHRIMP
```

<400> 153																
Met	Glu	Gly	Val	Ile	Leu	Asp	Lys	Ile	Glu	Thr	Ile	Ala	Lys	Arg	Asp	
1				5					10					15		
Ser	Tyr	Gly	Ser	Ile	Asp	Val	Gly	Thr	Ala	Ile	Leu	Arg	Arg	Gln	Phe	
			20					25					30			
Met	Glu	Lys	Ile	Arg	Gly	Lys	Ile	Asn	Glu	Glu	Thr	Thr	Met	Glu	Lys	
		35					40					45				
Ile	Met	Gly	Thr	Lys	Glu	Glu	Arg	Glu	Asp	Thr	Ile	Arg	Ser	Ile	Val	
	50				55						60					

WO 01/38351

232

PCT/US00/28888

Ala Asn Val Ile Lys Glu Asn Thr Val Lys Glu Asn Val Thr Glu Lys  
 65 70 75 80  
 Ile Arg Ala Met Thr Asp Lys Glu Leu Asn Asp Asn Arg Glu Phe Met  
 85 90 95  
 His Asp Phe Gly Lys Ile Ser Thr Gly Asp Gly Gly Thr Phe His Leu  
 100 105 110  
 Phe Glu Asp Thr Pro Gly Phe Glu Ser Ala Leu Lys Ala Glu Tyr Lys  
 115 120 125  
 Asn Val Pro Gly Ala Thr Thr Pro Lys Tyr Val Ser Met Asn Ser Leu  
 130 135 140  
 Arg Ile Asp Ala Ile Asn Gly Lys Ile Glu Glu Val Tyr Asn Pro Ser  
 145 150 155 160  
 Pro Ile Met Gly Ile Arg Glu Tyr Gly Thr Ile Arg Arg Gly Arg Tyr  
 165 170 175  
 Glu Glu Asn Ala Gly Ser Lys Glu Leu Val Phe Met Thr Lys Ile Glu  
 180 185 190  
 Lys Arg Pro Asn Asn Val Ala Glu Asn Leu Ile Ile Arg Val Ala Asn  
 195 200 205  
 Gln Gln Tyr Asn Val Met Arg Met Val Phe Phe Ile Asp Tyr Glu Thr  
 210 215 220  
 Lys Lys Gly Val Ser Lys Glu Glu Met Phe Ile Pro Tyr Asn Val Gln  
 225 230 235 240  
 Lys Thr Lys Ala Leu Lys Gly Arg Ser Thr Tyr Phe Ser Phe Val Arg  
 245 250 255  
 Lys Ile Pro Asp Glu Pro Glu Gly Ser Ile Ile Ile His Ala Leu Gly  
 260 265 270  
 Phe Tyr

<210> 154  
 <211> 486  
 <212> DNA  
 <213> SHRIMP

<400> 154  
 atgacatctc cagctccatc accctcttcc acccccaaat ccagttgtac cactattgta 60  
 aaccgatgtg gtttcctcct tgacaacaac aaggaagtgg tcactctacga caccaattcc 120  
 aaattcaagt gtgaacccaa aaatctggaa ctaattgggtg tactttctgg agtctctgat 180  
 aatgttggtta cccagatata ccccgaccag atatttgggtg gaacatatat ggtcaaatat 240  
 aactgggtcta aatctgggtca tgaacgcttc agtgacatga gtaacaactg tctggacaat 300  
 attacacgcc cttcagaagt gattgaaaagt gtgataaaga aaacgtccag cgactttaaa 360  
 atgaagtaca cacgttcctt gatggaccac accgagaaat actatttttc tgggtgaccaa 420  
 aaattgagca aaattagtag ttggtgtaca acccctatac gacagtgggt atgcaactcc 480  
 gtctag 486

<210> 155  
 <211> 159  
 <212> PRT  
 <213> SHRIMP

<400> 155  
 Met Thr Ser Pro Ala Pro Ser Pro Ser Ser Thr Pro Lys Ser Ser Cys  
 1 5 10 15  
 Thr Thr Ile Val Asn Arg Cys Gly Phe Leu Leu Asp Asn Asn Lys Glu  
 20 25 30  
 Val Val Ile Tyr Asp Thr Asn Ser Lys Phe Lys Cys Glu Pro Lys Asn  
 35 40 45  
 Leu Glu Leu Ile Gly Val Leu Ser Gly Val Ser Asp Asn Val Val Thr  
 50 55 60  
 Gln Ile Ser Pro Asp Gln Ile Phe Val Gly Thr Tyr Met Val Lys Tyr

65					70					75				80
Asn	Trp	Ser	Lys	Ser	Gly	His	Glu	Arg	Phe	Ser	Asp	Met	Ser	Asn
				85					90				95	
Cys	Leu	Asp	Asn	Ile	Trp	Ser	Glu	Val	Ile	Glu	Ser	Val	Ile	Lys
			100					105					110	
Thr	Ser	Ser	Asp	Phe	Lys	Met	Lys	Tyr	Thr	Arg	Ser	Leu	Met	Asp
		115					120					125		His
Thr	Glu	Lys	Tyr	Tyr	Phe	Ser	Gly	Asp	Gln	Lys	Leu	Ser	Lys	Ile
	130					135					140			Ser
Ser	Trp	Cys	Thr	Thr	Pro	Ile	Arg	Gln	Trp	Val	Cys	Asn	Ser	Val
145					150					155				

<210> 156  
 <211> 894  
 <212> DNA  
 <213> SHRIMP

<400> 156  
 atggcattac aggaaaagga tataactata gggaatgttt ctgctgccct acgagagttg 60  
 atgtactcac ccacacatat gcagcatcac gataagctaa acacattcct ggacagaaat 120  
 gttgaatcat cttcagaaga gaaaataaga caaattgtgg ataaaatacg atcccaaaaca 180  
 acatctgaca tatctgaaac agtcaataat gtcacaacta atgggactgc attttccctt 240  
 ttcgaagata ccttagaagg tatggtgaaa aaaaatatag gtgataacct tcagagtggg 300  
 gactttattg atggccgtaa aaagctcaat gacatgaaga gtctagctac tggagccatc 360  
 ttatctagac agcgagattt tggtgcagaa agtataacag gaacaaagga ctggctcaag 420  
 gctataatgg gttgtggtat tataagggtat actgtatttg tcaataacct tgcaagatca 480  
 acactcgata atgatgatga caaggcagca acctattata acaccctat atatggcggg 540  
 tattgtaaaa tggctataaa ggactatgaa ataccagatt cgtacagcaa ggtcgaagcg 600  
 gaacatacag ttgaagggaag aaagatgacc tttaatatata aatggagagg cgataccata 660  
 aacaacctaa taacaatcat cccttcagtg acagggttacc ttgcttccat ctctgaagac 720  
 gcagatgtgc aggcgccatt acttttaaac tgcaacaact gttttataga ggcagatag 780  
 agtagcctct acatggatga gaaaaaaca gaggcacat ttaccctcaa cttaccggaa 840  
 atcgaaggag ctgatgcgaa tgcagtctat gaaatatgta tagtagtagt ttga 894

<210> 157  
 <211> 297  
 <212> PRT  
 <213> SHRIMP

<400> 157  
 Met Ala Leu Gln Glu Lys Asp Ile Thr Ile Gly Asn Val Ser Ala Ala  
 1 5 10 15  
 Leu Arg Glu Leu Met Tyr Ser Pro Thr His Met Gln His His Asp Lys  
 20 25 30  
 Leu Asn Thr Phe Leu Asp Arg Asn Val Glu Ser Ser Ser Glu Glu Lys  
 35 40 45  
 Ile Arg Gln Ile Val Asp Lys Ile Arg Ser Gln Thr Thr Ser Asp Ile  
 50 55 60  
 Ser Glu Thr Val Asn Asn Val Thr Thr Asn Gly Thr Ala Phe Ser Leu  
 65 70 75 80  
 Phe Glu Asp Thr Leu Glu Gly Met Val Lys Lys Asn Ile Gly Asp Asn  
 85 90 95  
 Leu Gln Ser Gly Asp Phe Ile Asp Gly Arg Lys Lys Leu Asn Asp Met  
 100 105 110  
 Lys Ser Leu Ala Thr Gly Ala Ile Leu Ser Arg Gln Arg Asp Phe Val  
 115 120 125  
 Ala Glu Ser Ile Thr Gly Thr Lys Asp Trp Leu Lys Ala Ile Met Gly  
 130 135 140  
 Cys Gly Ile Ile Arg Tyr Thr Val Phe Val Asn Asn Leu Ala Arg Ser  
 145 150 155 160

Thr Leu Asp Asn Asp Asp Asp Lys Ala Ala Thr Tyr Tyr Asn Thr Pro  
 165 170 175  
 Ile Tyr Gly Gly Tyr Cys Lys Met Ala Ile Lys Asp Tyr Glu Ile Pro  
 180 185 190  
 Asp Ser Tyr Ser Lys Val Glu Ala Glu His Thr Val Glu Gly Arg Lys  
 195 200 205  
 Met Thr Phe Asn Ile Lys Trp Arg Gly Asp Thr Ile Asn Asn Leu Ile  
 210 215 220  
 Thr Ile Ile Pro Ser Val Thr Gly Tyr Leu Ala Ser Ile Ser Glu Asp  
 225 230 235 240  
 Ala Asp Val Gln Ala Pro Leu Leu Leu Asn Cys Asn Asn Cys Phe Ile  
 245 250 255  
 Glu Ala Asp Met Ser Ser Leu Tyr Met Asp Glu Lys Lys Thr Glu Ala  
 260 265 270  
 Ser Phe Thr Leu Asn Leu Pro Glu Ile Glu Gly Ala Asp Ala Asn Ala  
 275 280 285  
 Val Tyr Glu Ile Cys Ile Val Val Val  
 290 295

<210> 158  
 <211> 6588  
 <212> DNA  
 <213> SHRIMP

<400> 158  
 atgcaactcc gtctagaaaa ctttgtcaag gaagaacatg aaactgtcgt ggtgcacaac 60  
 ccttctggaa tgactggatt caacatattt aatagttccc ccgtgtattt tgaagtgcac 120  
 aatgagatgg acgccctaatt ttttatggcg gctttcttga agcacaatag tttatgggga 180  
 gaaattaacg ccaatatgga cttgtacacg ttgtattatg cgggtgcttt tctggacgaa 240  
 agatgggtgcc accacgagaa gagtttttct gtcgtccgag cacaacttat caactcgtat 300  
 tacaagtgcg ggagaaaaat catgcaagcc ctggacaata actacaacaa caagaataag 360  
 aagaggaaga atgttgggtgg agcacctgcg ttcacattta tgagcgggga cggagaggga 420  
 ggaaaggaag ccctagaagc tagtttccgat gtgattgggg gaacaagagg aggaagattt 480  
 ggtgttgatt caacaccatg cccccattct tcagccatgc aactaaaact ggacaatgaa 540  
 ggaaactatg gatgtattgc ctgcttcgca tcaatgttct ttgtattgga gaaccaggt 600  
 gatgaatcct ccttcataatc aacggatgcc tctaaaattg gacaagcgca agcatggata 660  
 gatgaacgac tacgaaacaa tgaaaatgga ggagaagaaa ataatgtcct taaaaagacc 720  
 ttccatatgc tggctgatat taccacaaag gctcatgaaa ctgcctattc caataccatc 780  
 ccacttggac ccaatggcag gcagtggaaat tggcctactc aactgtgga acctattgcc 840  
 catgaatttg ttaccatttc tctagtaaac acattgaaaa atctagggga tagaaaactt 900  
 ccccgattca attttgatat cttgtacaac ttgcttaatc catttggaata aatgttgcta 960  
 gtgtttattc aaaattgtca cattttaact ggacataaaa acaatgaaaa tgtggtgcct 1020  
 cgaggttctg cttctgggaa gtggtggact attaatgttg tgggtgtgaa catgtggact 1080  
 tttcaagtaa caaaatgtaa agttgaaaag gatagaaaaa tatccgattt ggctgtatg 1140  
 gaaactctcc ctgcgtctacc taatccagga agcactaccg tcgatgacag aatagttttt 1200  
 aagggattct gtagagggga aaatctaggg agtgtagggt aagtcgtatc cgacattaca 1260  
 cagagtgtca agaatttttg tctcatgggt gaaaatagga aatttagtgt ggataaagaa 1320  
 actggtttca tctcttcaga atcgatagtg tctgatccct tcttttcaat agaagtgact 1380  
 ggctgttagt ctaatcgtgc ccaagatact attaatatg gccaggttag tgctcgtgta 1440  
 atgaggatcc taaagtcacg tgaagggtgct cgtgtatggt tggccaagga tgaaaatgcc 1500  
 atcatctttg aaaacgttaa ccacgatacg gccatctcta cggacgctat ggagcgagct 1560  
 atagggcagc acaagatact gtactatgat attgaaacaa cagataaaga tttcaccgac 1620  
 aaaaaatcag tcatcacatc tattgggttc tgtttgtgta cgggagcgga tatgacacat 1680  
 ggaggagaga gaggagtatt tggactgggt gcacctggat ccgacgtgga aaaggtgaaa 1740  
 gagactataa taaattcgta cgatcctgaa gaaaaggaa acattatgaa acagtgcctt 1800  
 caagtgtatg aaattttcac caacgagttt gaaatgttgc ttggttttgg aaagtacata 1860  
 gataaagtga agcctcacgt gattagtggg tggacaatg tagcttttga cgaccctttt 1920  
 gtctttactc gtatcgtcaa acatttgagt gatcacacca aagacatgtc ttattgtgta 1980  
 gcagatgcat ctacagcaga atctgtcctt cctagagcaa cagaaggagg aggaggagga 2040  
 gaaactccat atagattgag caccctcaa gaaagaatac aactagcaag cactggtatt 2100

ttcaataaat	tgggaaaatt	tgtagacaag	aaaactggca	tgttgaaacc	tgaaatgact	2160
gcagatttat	tggccggggc	agaaagtcag	gccaatacca	agtttaagga	acgcaacaag	2220
ttatcctcca	gtaataaaag	atcagcagga	tggttccaga	aaattattgg	cgggtatgtg	2280
agtgtatttc	ggttggatct	catgaaagt	tgcgaaaagg	cctataaaga	atccctctct	2340
gaattttaatt	tgaacgccgt	gctcgccaaa	gtgagtagtg	tcggcgacaa	ggttaaaaaat	2400
gtaaaagatg	aagtagacct	acactttcat	ctattgggat	tcttgaagct	gaagaaggcc	2460
caggatcagg	caaaagtaca	cgtctattgt	tgcaaggatg	cctacttgac	tggtatagtt	2520
tctacctcca	tcaacaagga	aggggagatt	tttaggctgt	gtatggactc	tgctttaacc	2580
gaggcggtcg	tgacagccaa	cctggccact	cctctatgta	taggagaagg	agcaatctgt	2640
agaaatatgg	gagaagaaa	ggcagataga	agaggtgtgg	gagtaagaag	acactctatt	2700
gccacagaca	caaaggagg	tatggtgagt	caacctatcg	tcaatcatgt	tccctatcaa	2760
acgattgaca	tgacaagttt	gtacccgatg	accatgtgtc	agaataatct	gtgcaccact	2820
acctttgtga	cccactcgaca	aattatgcaa	ctgagggata	gattggtact	tgaaaaaatg	2880
aaaaacaaaa	ccaccgactc	tttattgttg	ttggacgtta	ttgacgagt	caatcagatt	2940
gtgttgtccg	agtacagacc	cattgatatt	gcagtcgcat	catggaagaa	tagcaactct	3000
aatagacaaa	ctccaattac	tcgcatagag	gaaagtttgg	gtctaagatt	catagaaaaat	3060
ttggatgccg	agaagacaaa	taataaaacg	tggtgcacca	atacatctcc	caatatgaat	3120
gtcactgccg	caggtatgga	ttacttcccc	gagatttgtt	gtgacattaa	tatgcagttt	3180
gcggccaaag	tgaatgatga	tatgcatata	gccccagcaa	gtttagagta	tatgcttcaa	3240
gtattgtccc	taatgttaat	cgacagaccg	tacattggcg	cacacataac	agctggaaaa	3300
tgctgtacat	tggagatat	tctctcagaa	ctcgaaaagg	acttttctgt	tgaaaaagat	3360
gaggaaatta	taagaaccca	ttggacattt	aagggtcaaa	aacaatacga	tttctgtcat	3420
agtcctgtga	cccaaatggc	tcgtcacatt	attgaatcta	cggaagaaa	tatccgtgat	3480
tatgaaggca	atgaaaaatt	cgagagggtt	gttagcttat	cagacagaat	ttatcgccgc	3540
gttggcgcgt	ttgattcggc	caatgatcca	gctgttagac	tgtggtcttc	tcgtctaata	3600
aatgttggaa	tgttggttag	gacatggaac	gtaaaaactg	acattcttaa	gggaatcatc	3660
cctcaaatgc	aagccactta	cagagccgat	cgagttgtga	tgcaagaaca	ggccaaggag	3720
tttgccaaga	tgggagacat	gaaaagagct	ggtctaaaca	aagttggaca	aaatattatg	3780
aagctcggta	tgaattccat	gtatggtcat	ttggccctaa	gagcacgttc	gagccgtaaa	3840
gagtttgcgt	ctggatctgc	caatactgcc	tcaagtattt	ccaacatgtc	agccaccgga	3900
ggaattggag	gaggcacaag	gcactcgggt	acggccaatc	agattacaga	aaatgctcga	3960
tgtgtatttg	gcaatattgg	ttgtggatta	cagatggctc	ttcctggtac	taagcagacg	4020
tacggggata	cagattctgt	attctgcgtg	cataatattg	taggtgatgg	aggaatgata	4080
ccagaatatg	atgaacaaac	tggcaaatat	tattatgtga	tggatattgc	tctaaaaaat	4140
aaaatggctg	caattattcc	catcctagtc	aactcggtta	caaagggcat	ccagtttgta	4200
gagcgccgag	acgctggtgt	gggcatgatg	aatatcgccc	atgaacgtct	agctgtcgct	4260
ggtcttttgt	ttgccaaaga	aacataccat	atgcttcact	ttaatgaaaa	tagtgacagc	4320
ttcaatgaca	tgataaaatt	gaaatcaaac	gataacaata	ataagtttgc	atcctttatc	4380
aagagacctc	gccacgcaga	tgggtatgtt	gtccccata	atccttcatt	gattcttaga	4440
gcgccgaag	gacccgctgg	taagaaattg	aaaagctttt	tggagagga	aggaattcat	4500
gacgagaaga	gtatggagga	atggtttacc	tcttcaccta	cgtggatggc	catggatgct	4560
tctgttatca	acaacttgta	tgccctacaa	attgtagggg	tggagaaggg	taactggatt	4620
gacgccatga	cttcccggcc	catagaagcg	ggtacagaaa	tgatggaggc	ggtgacgcaa	4680
gcgaatgcag	ctttcaccct	ttacaaaaag	ggagcctttg	tgaagaaggg	aattacaccc	4740
accaccaaac	taaaggggtct	ccaatcattg	attgcaagat	ttttaccaaa	aatagaggaa	4800
aagaaaagct	gttatattgga	tgtgatgaag	aatcatgtgg	agaattttgc	atcccatata	4860
acaaatcctg	ctatgatgat	tactagttcc	cgagtcaaca	agtttgatac	gtcaaaagaa	4920
cagagtagac	ctaactctct	agctctagcg	ataaataacc	acctgaaccc	ttcttcagaa	4980
atttcattgg	ggcagaaatt	taagacgggt	acatcagttt	cttcttgagg	tctttcggca	5040
gaggaaaggg	aagtccttgc	tggttatttt	aacgttggtg	gcgtgcgttg	ggatgccacc	5100
aacatgaagg	gaagtgttcc	tgcatatttc	gtcaagaatt	tatctgttgt	gccaacggcc	5160
atcacatctg	tatacaagat	ggttgagagc	gataagacgg	caataaaatc	catgattgct	5220
aaaaatgtag	aagtgttgtg	ttctacatct	gccaaacttg	gattttctct	gagaagagga	5280
gcattgtcat	ttaatacagg	cgtcattggt	acaaaggacg	tggctatggc	ttgtatacga	5340
tctctaaata	ataaacaaat	gttattgttt	gttggagggg	gaaaggatta	cgggtgaagac	5400
gacgacgac	acgacgaag	agcagaagaa	gaggacgaag	aaaatggtga	aaacgaagag	5460
aacaaagggt	actgtgtcac	ggaaaaaaag	atccctggac	gaagcactaa	caagatgttt	5520
ggtgaagaaa	ctaaaaacaag	cgagaaaacg	gagggagaaa	gaaagggctc	taagacggca	5580
aagggaaaaga	cggaggaaat	tgctagtctg	ttgagtaaat	gtgggaagaa	agatgcgaga	5640
gatgtcattc	tgaccggttt	actaaaagca	acacattctt	cttgacacaa	caatgaagag	5700
agaaccagag	tcttacaaca	atatagcaat	tgtacattat	cttctatat	aacttcagtc	5760

```

atgaaattgg accaaagagt agcagaccaa atggaaaatt taatatctca attggatcaa 5820
atacgtaatc tctccaacaa gaagaggcaa gaaaaggag ggccttttaa gtctgaattg 5880
gacgccatgg ttgctgcagt taaggttaag tttttccag ttttagatgc gtctagaaaa 5940
ttgactcaag accattggaa aaagtgtccc gtgtccatcc cagaaacgcg tgaagaaaaa 6000
ccattaatgg gtgtgccttt tgaagttgca ctcaattctc taataggaaa acacaagtgc 6060
acagatacat gcgacatggc ttgttgtcaa tcattgtatt ttgtcctctt gtacacgcta 6120
gctttaaaat ttgagaacga aagattggcc cggcaaattg gcctagatga ctctgtagat 6180
ttgatggctg agatgttgtt cggaggggat aaactattgg ccaggaagt gttaaaaagg 6240
gtaaaagatg ctcaagatag aaagtgtgtg aaatctttat tgcctttaaa ttataacat 6300
gacacaaata caattatatt tttgtttgag tctttaaggt ttgctcagaa acctgtagct 6360
ggtatgagtg ttagtgaaat aaaagacgct gttagaggtc tggccttttc taccactaca 6420
ggtactgtgt ggaattatac tgatgaaaga ttttttgac cattgtataa catggatgaa 6480
ctttgtaacg aacgtgtcaa tggaaattgt aaattgtcct ttataactgg tatttatcat 6540
acggcagcag tagaattggc tgctgcatgt ctatcttgtg ttttgtaa 6588

```

<210> 159  
 <211> 2183  
 <212> PRT  
 <213> SHRIMP

<400> 159

Met	Gln	Leu	Arg	Leu	Glu	Asn	Phe	Val	Lys	Glu	Glu	His	Glu	Thr	Val
1				5					10					15	
Val	Val	His	Asn	Pro	Ser	Gly	Met	Thr	Gly	Phe	Asn	Ile	Phe	Asn	Ser
			20					25					30		
Ser	Pro	Val	Tyr	Phe	Glu	Val	His	Asn	Glu	Met	Asp	Ala	Leu	Ile	Phe
		35					40					45			
Met	Ala	Ala	Phe	Leu	Lys	His	Asn	Ser	Leu	Trp	Gly	Glu	Ile	Asn	Ala
	50				55						60				
Asn	Met	Asp	Leu	Tyr	Thr	Phe	Asp	Tyr	Ala	Gly	Ala	Phe	Leu	Asp	Glu
65					70				75					80	
Arg	Trp	Cys	His	His	Glu	Lys	Ser	Phe	Ser	Val	Val	Arg	Ala	Gln	Leu
			85					90						95	
Ile	Asn	Ser	Tyr	Tyr	Lys	Cys	Arg	Arg	Lys	Ile	Met	Gln	Ala	Leu	Asp
			100					105					110		
Asn	Asn	Tyr	Asn	Asn	Lys	Asn	Lys	Lys	Arg	Lys	Asn	Val	Gly	Gly	Ala
		115					120					125			
Pro	Ala	Phe	Thr	Phe	Met	Ser	Gly	Asp	Gly	Glu	Gly	Gly	Lys	Glu	Ala
	130					135					140				
Leu	Glu	Ala	Ser	Phe	Asp	Val	Ile	Gly	Gly	Thr	Arg	Gly	Gly	Arg	Phe
145					150					155				160	
Gly	Val	Asp	Ser	Thr	Pro	Cys	Pro	His	Ser	Ser	Ala	Met	Gln	Leu	Lys
			165					170						175	
Leu	Asp	Asn	Glu	Gly	Asn	Tyr	Gly	Cys	Ile	Ala	Cys	Phe	Ala	Ser	Met
		180					185					190			
Phe	Phe	Val	Leu	Glu	Asn	Pro	Gly	Asp	Glu	Ser	Ser	Phe	Ile	Ser	Thr
	195					200					205				
Asp	Ala	Ser	Lys	Ile	Gly	Gln	Ala	Gln	Ala	Trp	Ile	Asp	Glu	Arg	Leu
	210					215					220				
Arg	Asn	Asn	Glu	Asn	Gly	Gly	Glu	Glu	Asn	Asn	Val	Phe	Lys	Lys	Thr
225					230					235				240	
Phe	His	Met	Leu	Ala	Asp	Ile	Thr	Gln	Lys	Ala	His	Glu	Thr	Ala	Tyr
			245					250						255	
Ser	Asn	Thr	Ile	Pro	Leu	Gly	Pro	Asn	Gly	Arg	Gln	Trp	Asn	Trp	Pro
		260						265					270		
Thr	His	Thr	Val	Glu	Pro	Ile	Ala	His	Glu	Phe	Val	Thr	His	Ser	Leu
		275					280					285			
Val	Asn	Thr	Leu	Lys	Asn	Leu	Gly	Asp	Arg	Lys	Leu	Pro	Arg	Phe	Asn
	290					295					300				
Phe	Asp	Ile	Leu	Tyr	Asn	Leu	Leu	Asn	Pro	Phe	Gly	Lys	Met	Leu	Leu
305					310					315					320



Val	Phe	Ile	Gln	Asn	Cys	His	Ile	Leu	Thr	Gly	His	Lys	Asn	Asn	Glu
				325					330					335	
Asn	Val	Val	Pro	Arg	Gly	Ser	Ala	Ser	Gly	Lys	Trp	Trp	Thr	Ile	Asn
			340					345						350	
Phe	Val	Gly	Val	Asn	Met	Trp	Thr	Phe	Gln	Val	Thr	Lys	Cys	Lys	Val
		355					360					365			
Glu	Lys	Asp	Arg	Lys	Ile	Ser	Asp	Leu	Ala	Cys	Met	Leu	Pro	Arg	Leu
		370					375				380				
Pro	Asn	Pro	Gly	Ser	Thr	Thr	Val	Asp	Asp	Arg	Ile	Val	Phe	Lys	Gly
385					390					395					400
Phe	Cys	Arg	Gly	Glu	Asn	Leu	Gly	Ser	Val	Gly	Glu	Val	Val	Ser	Asp
				405					410					415	
Ile	Thr	Gln	Ser	Val	Lys	Asn	Phe	Cys	Leu	Met	Val	Glu	Asn	Arg	Lys
			420					425						430	
Phe	Ser	Val	Asp	Lys	Glu	Thr	Gly	Phe	Ile	Ser	Ser	Glu	Ser	Ile	Val
		435					440					445			
Ser	Asp	Pro	Phe	Phe	Ser	Leu	Glu	Val	Thr	Gly	Cys	Arg	Ser	Asn	Arg
		450				455					460				
Ala	Gln	Asp	Thr	Ile	Asn	Asn	Gly	Arg	Val	Ser	Ala	Arg	Val	Met	Arg
465					470					475					480
Ile	Leu	Lys	Ser	Arg	Glu	Gly	Ala	Arg	Val	Trp	Leu	Ala	Lys	Asp	Glu
				485					490					495	
Asn	Ala	Ile	Ile	Phe	Glu	Asn	Val	Asn	His	Asp	Thr	Ala	Ile	Ser	Thr
			500					505					510		
Asp	Ala	Met	Glu	Arg	Ala	Ile	Gly	Gln	His	Lys	Ile	Leu	Tyr	Tyr	Asp
		515					520					525			
Ile	Glu	Thr	Thr	Asp	Lys	Asp	Phe	Thr	Asp	Lys	Lys	Ser	Val	Ile	Thr
		530				535					540				
Ser	Ile	Gly	Phe	Cys	Leu	Cys	Thr	Gly	Gly	Asp	Met	Thr	His	Gly	Gly
545					550					555					560
Glu	Arg	Gly	Val	Phe	Gly	Leu	Val	Ala	Pro	Gly	Ser	Asp	Val	Glu	Lys
				565					570					575	
Val	Lys	Glu	Thr	Ile	Ile	Asn	Ser	Tyr	Asp	Pro	Glu	Glu	Lys	Glu	Asp
			580					585					590		
Ile	Met	Lys	Gln	Cys	Pro	Gln	Val	Ile	Glu	Ile	Phe	Thr	Asn	Glu	Phe
		595					600					605			
Glu	Met	Leu	Leu	Gly	Phe	Gly	Lys	Tyr	Ile	Asp	Lys	Val	Lys	Pro	His
		610					615					620			
Val	Ile	Ser	Gly	Trp	Asn	Asn	Val	Ala	Phe	Asp	Asp	Pro	Phe	Val	Phe
625					630					635					640
Thr	Arg	Ile	Val	Lys	His	Leu	Ser	Asp	His	Thr	Lys	Asp	Met	Ser	Tyr
				645					650					655	
Cys	Val	Ala	Asp	Ala	Ser	Thr	Ala	Glu	Ser	Val	Leu	Pro	Arg	Ala	Thr
			660					665					670		
Glu	Gly	Gly	Gly	Gly	Gly	Glu	Thr	Pro	Tyr	Arg	Leu	Ser	Thr	Pro	Gln
		675					680					685			
Glu	Arg	Ile	Gln	Leu	Ala	Ser	Thr	Gly	Ile	Phe	Asn	Lys	Leu	Gly	Lys
		690				695					700				
Phe	Val	Asp	Lys	Lys	Thr	Gly	Met	Leu	Lys	Pro	Glu	Met	Thr	Ala	Asp
705					710					715					720
Leu	Leu	Ala	Gly	Ala	Glu	Ser	Gln	Ala	Asn	Thr	Lys	Phe	Lys	Glu	Arg
				725					730					735	
Asn	Lys	Leu	Ser	Ser	Ser	Asn	Lys	Gly	Ser	Ala	Gly	Trp	Phe	Gln	Lys
			740					745					750		
Ile	Ile	Gly	Gly	Met	Cys	Ser	Ala	Ile	Arg	Leu	Asp	Leu	Met	Lys	Val
		755					760					765			
Cys	Glu	Lys	Ala	Tyr	Lys	Glu	Ser	Leu	Ser	Glu	Phe	Asn	Leu	Asn	Ala
		770				775					780				
Val	Leu	Ala	Lys	Val	Ser	Ser	Val	Gly	Asp	Lys	Val	Lys	Asn	Val	Lys
785					790					795					800
Asp	Glu	Val	Asp	Leu	His	Phe	His	Leu	Leu	Gly	Phe	Leu	Lys	Leu	Lys

				805					810					815	
Lys	Ala	Gln	Asp	Gln	Ala	Lys	Val	His	Val	Tyr	Cys	Cys	Lys	Asp	Ala
			820					825					830		
Tyr	Leu	Thr	Gly	Ile	Val	Ser	Thr	Ser	Ile	Asn	Lys	Glu	Gly	Glu	Ile
		835					840					845			
Phe	Arg	Leu	Cys	Met	Asp	Ser	Ala	Leu	Thr	Glu	Ala	Val	Val	Thr	Ala
	850					855					860				
Asn	Leu	Ala	Thr	Pro	Leu	Cys	Ile	Gly	Glu	Gly	Ala	Ile	Cys	Arg	Asn
865					870					875					880
Met	Gly	Glu	Glu	Arg	Ala	Asp	Arg	Arg	Gly	Val	Gly	Val	Arg	Arg	His
				885					890					895	
Ser	Ile	Ala	Thr	Asp	Thr	Lys	Gly	Gly	Met	Val	Ser	Gln	Pro	Ile	Val
			900					905					910		
Asn	His	Val	Pro	Tyr	Gln	Thr	Ile	Asp	Met	Thr	Ser	Leu	Tyr	Pro	Met
	915						920					925			
Thr	Met	Cys	Gln	Asn	Asn	Leu	Cys	Thr	Thr	Thr	Phe	Val	Thr	Gln	Ile
	930					935					940				
Met	Gln	Leu	Arg	Asp	Arg	Leu	Val	Leu	Glu	Lys	Met	Lys	Asn	Lys	Thr
945					950					955					960
Thr	Asp	Ser	Leu	Leu	Leu	Leu	Asp	Val	Ile	Asp	Glu	Cys	Asn	Gln	Ile
				965					970					975	
Val	Leu	Ser	Glu	Tyr	Arg	Pro	Ile	Asp	Ile	Ala	Val	Ala	Ser	Trp	Lys
		980						985					990		
Asn	Ser	Asn	Ser	Asn	Arg	Gln	Thr	Pro	Ile	Thr	Arg	Ile	Glu	Glu	Ser
	995					1000						1005			
Leu	Gly	Leu	Arg	Phe	Ile	Glu	Asn	Leu	Asp	Ala	Glu	Lys	Thr	Asn	Asn
	1010					1015					1020				
Lys	Thr	Trp	Cys	Thr	Asn	Thr	Ser	Pro	Asn	Met	Asn	Val	Thr	Ala	Ala
1025					1030					1035					1040
Gly	Met	Asp	Tyr	Phe	Pro	Glu	Ile	Val	Cys	Asp	Ile	Asn	Met	Gln	Phe
				1045					1050					1055	
Ala	Ala	Lys	Val	Asn	Asp	Asp	Met	His	Ile	Ala	Pro	Ala	Ser	Leu	Glu
		1060						1065					1070		
Tyr	Met	Leu	Gln	Val	Leu	Pro	Ile	Met	Leu	Ile	Asp	Arg	Pro	Tyr	Ile
	1075						1080					1085			
Gly	Ala	His	Ile	Thr	Ala	Gly	Lys	Cys	Arg	Thr	Leu	Glu	Asp	Ile	Leu
	1090					1095					1100				
Ser	Glu	Leu	Glu	Lys	Asp	Phe	Ser	Val	Glu	Lys	Asp	Glu	Glu	Ile	Ile
1105					1110					1115					1120
Arg	Thr	His	Trp	Thr	Phe	Lys	Gly	Gln	Lys	Gln	Tyr	Asp	Phe	Cys	His
				1125					1130					1135	
Ser	Pro	Val	Thr	Gln	Met	Ala	Arg	His	Ile	Ile	Glu	Ser	Thr	Gly	Arg
		1140						1145					1150		
Asn	Ile	Arg	Asp	Tyr	Glu	Gly	Asn	Glu	Lys	Phe	Glu	Arg	Leu	Val	Ser
	1155						1160					1165			
Leu	Ser	Asp	Arg	Ile	Tyr	Arg	Arg	Val	Gly	Ala	Phe	Asp	Ser	Ala	Asn
	1170					1175					1180				
Asp	Pro	Ala	Val	Arg	Leu	Trp	Ser	Ser	Arg	Leu	Ile	Asn	Val	Gly	Met
1185					1190					1195					1200
Leu	Val	Arg	Thr	Trp	Asn	Val	Lys	Thr	Asp	Ile	Leu	Lys	Gly	Ile	Ile
				1205					1210					1215	
Pro	Gln	Met	Gln	Ala	Tyr	Ala	Asp	Arg	Val	Val	Met	Gln	Asn	Lys	Ala
				1220				1225					1230		
Lys	Glu	Phe	Ala	Lys	Met	Gly	Asp	Met	Lys	Arg	Ala	Gln	Lys	Val	Gly
		1235					1240					1245			
Gln	Asn	Ile	Met	Lys	Leu	Gly	Met	Asn	Ser	Met	Tyr	Gly	His	Leu	Ala
	1250					1255					1260				
Leu	Arg	Ala	Arg	Ser	Ser	Arg	Lys	Glu	Phe	Ala	Ser	Gly	Ser	Ala	Asn
1265					1270					1275					1280
Thr	Ala	Ser	Ser	Ile	Ser	Asn	Met	Ser	Ala	Thr	Gly	Gly	Ile	Gly	Gly
				1285					1290					1295	

Gly Thr Arg His Ser Val Thr Ala Asn Gln Ile Thr Glu Asn Ala Arg  
 1300 1305 1310  
 Cys Val Phe Gly Asn Ile Gly Cys Gly Leu Gln Met Ala Leu Pro Gly  
 1315 1320 1325  
 Thr Lys Gln Thr Tyr Gly Asp Thr Asp Ser Val Phe Cys Val His Asn  
 1330 1335 1340  
 Ile Val Gly Asp Gly Gly Met Ile Pro Glu Tyr Asp Glu Gln Thr Gly  
 1345 1350 1355 1360  
 Lys Tyr Tyr Tyr Val Met Asp Ile Ala Leu Lys Asn Lys Met Ala Ala  
 1365 1370 1375  
 Ile Ile Pro Ile Leu Val Asn Ser Leu Thr Lys Gly Ile Gln Phe Val  
 1380 1385 1390  
 Glu Arg Arg Asp Ala Gly Val Gly Met Met Asn Ile Ala His Glu Arg  
 1395 1400 1405  
 Leu Ala Val Ala Gly Leu Leu Phe Ala Lys Lys Thr Tyr His Met Leu  
 1410 1415 1420  
 His Phe Asn Glu Asn Ser Ala Ala Phe Asn Asp Met Ile Lys Leu Lys  
 1425 1430 1435 1440  
 Ser Thr Asp Asn Asn Asn Lys Phe Ala Ser Phe Ile Lys Arg Pro Ser  
 1445 1450 1455  
 His Ala Asp Gly Tyr Val Val Pro His Asn Pro Ser Leu Ile Leu Arg  
 1460 1465 1470  
 Ala Ala Glu Gly Pro Ala Gly Lys Lys Leu Lys Ser Phe Leu Glu Glu  
 1475 1480 1485  
 Glu Gly Ile His Asp Glu Lys Ser Met Glu Glu Trp Phe Thr Ser Ser  
 1490 1495 1500  
 Pro Thr Trp Met Ala Met Asp Ala Ser Val Ile Asn Asn Leu Tyr Ala  
 1505 1510 1515 1520  
 Ser Gln Ile Val Gly Val Glu Lys Gly Asn Trp Ile Asp Ala Met Thr  
 1525 1530 1535  
 Ser Arg Pro Ile Glu Ala Gly Thr Glu Met Met Glu Ala Val Thr Gln  
 1540 1545 1550  
 Ala Asn Ala Ala Phe Thr Pro Tyr Lys Lys Gly Ala Phe Val Lys Lys  
 1555 1560 1565  
 Gly Ile Thr Pro Thr Thr Lys Leu Lys Gly Leu Gln Ser Leu Ile Ala  
 1570 1575 1580  
 Arg Phe Leu Pro Lys Ile Glu Glu Lys Lys Ser Cys Tyr Leu Asp Val  
 1585 1590 1595 1600  
 Met Lys Asn His Val Glu Asn Phe Ala Ser His Ile Thr Asn Pro Ala  
 1605 1610 1615  
 Met Met Ile Thr Ser Ser Arg Val Asn Lys Phe Asp Thr Ser Lys Glu  
 1620 1625 1630  
 Gln Ser Arg Pro Asn Pro Leu Ala Ile Asn Asn His Leu Asn Pro Ser  
 1635 1640 1645  
 Ser Glu Ile Ser Leu Gly Gln Lys Phe Lys Thr Val Thr Ser Val Ser  
 1650 1655 1660  
 Ser Trp Ser Leu Ser Ala Glu Glu Gly Glu Val Pro Ala Gly Tyr Phe  
 1665 1670 1675 1680  
 Asn Ala Gly Ser Val Arg Trp Asp Ala Thr Asn Met Lys Gly Ser Val  
 1685 1690 1695  
 Pro Ala Phe Ser Val Lys Asn Leu Ser Val Val Pro Asn Ala Ile Thr  
 1700 1705 1710  
 Ser Val Tyr Lys Met Val Glu Ser Asp Lys Thr Ala Ile Lys Ser Met  
 1715 1720 1725  
 Ile Ala Lys Asn Val Glu Val Leu Cys Ser Thr Ser Ala Asn Thr Gly  
 1730 1735 1740  
 Phe Ser Leu Arg Arg Gly Ala Leu Ser Phe Asn Thr Gly Val Ile Val  
 1745 1750 1755 1760  
 Thr Lys Asp Val Ala Met Ala Cys Ile Arg Ser Leu Asn Asn Lys Gln  
 1765 1770 1775  
 Met Leu Leu Phe Val Gly Gly Gly Lys Asp Tyr Gly Glu Asp Asp Asp

				1780					1785				1790				
Asp	Asp	Asp	Glu	Glu	Ala	Glu	Glu	Glu	Asp	Glu	Glu	Asn	Gly	Glu	Asn		
		1795					1800					1805					
Glu	Glu	Asn	Lys	Gly	Asp	Cys	Val	Thr	Glu	Lys	Lys	Ile	Pro	Gly	Arg		
	1810					1815						1820					
Ser	Thr	Asn	Lys	Asp	Val	Gly	Glu	Glu	Thr	Lys	Thr	Ser	Glu	Lys	Thr		
1825					1830						1835					1840	
Glu	Gly	Glu	Arg	Lys	Gly	Ser	Lys	Thr	Ala	Lys	Gly	Lys	Thr	Glu	Glu		
				1845					1850						1855		
Ile	Ala	Ser	Ser	Leu	Ser	Lys	Cys	Gly	Lys	Lys	Asp	Ala	Arg	Asp	Val		
			1860					1865						1870			
Ile	Leu	Asp	Arg	Leu	Leu	Lys	Ala	Thr	His	Ser	Ser	Cys	Thr	Asn	Asn		
		1875					1880					1885					
Glu	Glu	Arg	Thr	Arg	Val	Leu	Gln	Gln	Tyr	Ser	Asn	Cys	Thr	Leu	Ser		
	1890					1895					1900						
Ser	Tyr	Ile	Thr	Ser	Val	Met	Lys	Leu	Asp	Gln	Arg	Val	Ala	Asp	Gln		
1905					1910					1915					1920		
Met	Glu	Asn	Leu	Ile	Ser	Gln	Leu	Asp	Gln	Ile	Arg	Asn	Leu	Ser	Asn		
				1925					1930						1935		
Lys	Lys	Arg	Gln	Glu	Lys	Gly	Gly	Pro	Phe	Lys	Ser	Glu	Leu	Asp	Ala		
			1940					1945						1950			
Met	Val	Ala	Ala	Val	Lys	Val	Lys	Phe	Phe	Pro	Val	Leu	Asp	Ala	Ser		
		1955					1960					1965					
Arg	Lys	Leu	Thr	Gln	Asp	His	Trp	Lys	Lys	Cys	Pro	Val	Ser	Ile	Pro		
	1970					1975					1980						
Glu	Thr	Arg	Glu	Glu	Lys	Pro	Leu	Met	Gly	Val	Pro	Phe	Glu	Val	Asn		
1985					1990					1995					2000		
Ser	Leu	Ile	Gly	Lys	His	Lys	Cys	Thr	Asp	Thr	Cys	Asp	Met	Ala	Cys		
				2005					2010						2015		
Cys	Gln	Ser	Leu	Tyr	Phe	Val	Leu	Leu	Tyr	Thr	Leu	Ala	Leu	Lys	Phe		
			2020					2025						2030			
Glu	Asn	Glu	Arg	Leu	Ala	Arg	Gln	Ile	Gly	Leu	Asp	Asp	Ser	Val	Asp		
		2035					2040					2045					
Leu	Met	Ala	Glu	Met	Leu	Phe	Gly	Gly	Asp	Lys	Leu	Leu	Ala	Gln	Glu		
	2050					2055					2060						
Val	Leu	Lys	Arg	Val	Lys	Asp	Ala	Gln	Asp	Arg	Lys	Leu	Val	Lys	Ser		
2065					2070					2075					2080		
Leu	Leu	Pro	Leu	Asn	Tyr	Asn	His	Asp	Thr	Asn	Thr	Ile	Ile	Phe	Leu		
				2085					2090								

<210> 160  
<211> 4172  
<212> DNA  
<213> SHRIMP

<400> 160  
atgactgaac aaggggatca aggaataaaa gtaaggaaat tacatggccc gagaggagaa 60  
agaggagaaa ctggtccagc aggagcagtt ggccctgcag gccctcaagg agaaagagga 120

gcaattggac	cggcaggaaa	ggatggagca	gttggccctg	caggccctca	aggagaaa	180
ggagcaattg	gaccggcagg	aaaggatgga	gcagttggcc	ctcaaggccc	tccaggagaa	240
agaggagaaa	atggacgccc	aggaagagat	ggagcagttg	gccctcaagg	agaaaaggga	300
gcaattggac	cggcaggaaa	ggatggagca	gttggccctc	aaggagaaa	aggagcaatt	360
ggaccggcag	gaaaggatgg	agcagttggc	cctgcaggcc	ctcaaggaga	aaggaggagaa	420
aatggacgcc	caggaagaga	tggagcagtt	ggccctgcag	gccctccagg	agaaaaggga	480
gcaattggac	cggcaggaa	agatggagca	gttggccctg	caggccctcc	aggagaaa	540
ggagcaacag	gtataccagg	aagggatggc	gtggacggtt	ctgtgggccc	tcaaggagaa	600
agaggagaaa	ttggacgccc	aggaagagat	ggagcagttg	gccctgcagg	ccctcaaggga	660
agaagaggag	caacaggacg	cgcaggaaa	gatggtgcag	ttggtcctgc	aggccctcaa	720
ggagaaaaag	gagaagctgg	taaggacggt	tctatagggc	ctcaaggaa	acaaggccca	780
agaggagaga	ctggaccacc	gggaagggac	ggcactgcag	cagaaaagg	agaaaagggc	840
ttcccaggac	caccaggcga	aactggacca	ccaggaaa	atggtgtgga	tgtttctgag	900
ggccctcaag	ggaaaaggag	agaaacagga	cccgttggac	ctagggtgga	accaggctca	960
gctggcctcc	caggaaagga	tggagcaatt	ggccctgcag	gccctccagg	agaaaaggga	1020
gcaactggtc	taccaggaag	gaatggtgtg	gatggttcta	tcggccccc	aggaagaaga	1080
ggagcaacag	gccgcgcagg	aaaggatggg	gcagttggcc	ctgcaggccc	tccaggagaa	1140
agaggagcaa	caggtatacc	aggaagggat	ggtgtggacg	gttctgtggg	ccctccaggga	1200
gaaagaggag	aaactggacc	agcaggaa	gacggttcag	ttggccctgc	tggccctcat	1260
ggagaaaagag	gagaaaatgg	acgcccagga	agagatggg	caactggccc	tataggtcct	1320
gctggtcctc	aaggagaaaa	aggagaaaa	ggacgcccag	gaagagatgg	agcaactggc	1380
cctataggcc	ctagaggaga	aactggtgca	atgggaaaga	atggcgtgga	cgtttctatg	1440
ggtcctcaag	gaagaagagg	agcaacaggc	cgcgcaggaa	aggatggggc	agttggccct	1500
gctggccctc	caggagaaa	aggagaaact	ggaccagcag	gaagggacgg	ttcagttggc	1560
cctgctggcc	ctcaaggaga	aacaggatta	actggcagcc	caggaagaga	tggagcaact	1620
ggccctatag	gtcctgtctg	ccctcaagg	gaaaaggag	aaaatggacg	cccaggagaa	1680
gatggagcaa	ctggccctat	aggtcctgct	ggccctcaag	gagaaaaagg	agaaaatgga	1740
cgcccaggaa	gagatggagc	aactggccct	ataggtcctg	ctggccctca	aggagaaaca	1800
ggattaactg	gacgcccagg	aagagatgga	gcaactggcc	ctataggtcc	tagaggagaa	1860
actggtgcaa	tgggaaagaa	tgggtgtggac	ggttctacgg	gtcctcaagg	aagaagagga	1920
gcaacaggcc	gcgcaggaaa	ggatggagca	gttggccctg	ctggccctcc	aggagaaa	1980
ggagaaaagg	cagcccagg	aagagatgga	gcaactggcc	ctataggtcc	tgctggccct	2040
caaggagaaa	caggattagc	tgggctgcca	ggaagagatg	gagcaattgg	tcctcaaggga	2100
gaaaaggagg	aaaatggacg	cccaggaaa	gatggggcaa	ctggccctat	gggtcctcca	2160
ggagaaaagg	gagagactgg	tcctataggt	cctgctggcc	ctcaaggagc	aactggtctt	2220
ccagggaagg	atggtgtgga	tggttctgtt	ggccctcaag	gaaaaagagg	attaataggg	2280
cgcacaggaa	gggatggggc	aattggccct	gtaggtcctg	caggccctaa	aggagaaa	2340
ggattagctg	gcctgccagg	gatatagga	aaggacggtt	ccgtgggtcc	tcaaggagca	2400
attggaccta	taggtccacg	aggagaaa	gagaaaactg	gacgaccagg	aagggacggt	2460
gaggatggtt	ccacaggccc	tatgggcccc	caaggactaa	gaggagctac	gggagctcca	2520
ggaccgcaag	gagaaagagg	attaaaggga	cggccaggaa	aagatggtga	aacaggctct	2580
ccaggggcag	aaggaaaggga	tggaaataatg	ggtcctaggg	gtcctcgagg	agaaaaaggga	2640
gcacctggta	atgatggtct	agagggacct	gaagggaag	atggtgcacc	tgggtcccgt	2700
ggccctattg	gacctcaagg	aataagagga	ttaaaaggta	tccagggacg	accaggagaa	2760
gacggagaaa	tgggaccagc	cggcaaggac	ggaatagaag	gccctagagg	tcaagatgga	2820
acaactggcg	ctaaaggacc	tagaggatta	agaggttttc	aagggaaga	aggagaaact	2880
ggtgcacaag	gatctagagg	agaaaaaggc	gatagagggc	taacaggccc	tcaaggagaa	2940
gacggtccac	ccggtgaaga	aggtcctcaa	ggtccttagag	gagaaaagg	agcacctggc	3000
cctagaggtc	ctagaggtat	tcgtggccgt	tcaggacctc	aaggaaagta	cggcgtgcaa	3060
ggacctcgag	gtcccaggag	aacaaaaggga	agaacaggaa	tacaaggcct	cactggcata	3120
gaaggtcctc	gaggtcctag	aggtatacaa	ggaaaaggag	gaagaaatggg	gaaaattgga	3180
catcgaggag	aaaagggtga	taaaggagac	cgtggagaac	aaggcatcgc	tggagcagac	3240
ggggaaaaag	gtccaagagg	tttacgagga	attcgaggcc	ctattggtgc	tcctggtaag	3300
cctggcacgg	aagggttag	aggtcctaga	ggggtgagag	gtgtcctgg	ctatcctggc	3360
gcacaagggg	aattaggtcc	ccaaggacca	acaggctcct	aagggccagc	aggtcctcaa	3420
gggcccagtg	ggcgtacagg	agatactggt	ccatggggcc	ctcctggagc	agtgaggacca	3480
agaggagaga	aaggaggtag	aggaagaaag	ggaaaaaatg	gccctaaagg	agcggagcga	3540
aaagatgccg	taaatatcat	acaaaaatat	tcaatcacc	atgctcgtgc	agagataatg	3600
tgggaaggaa	atgaaatcgg	agaagcatat	attggaagat	cttatggaac	tgatacaatc	3660
cctgtgatga	tagaaaatag	aatagggatg	acaaatgagg	acaaaaaaa	cgaatattgt	3720
atacaagtaa	tgacaatgca	ctcaataaca	actagaggaa	gaacatcggg	tgtttttgtg	3780

```

gtaagcaata agacagatta tatcctttta gttactttac tgatgccaga aagtgtttcc 3840
tgtagaacag atgtcagtac aaatgcgagg tcagagaggg tgaatgctgt tagagaaaga 3900
gaaagcaaat cgtacagatt tattaggccg tctgaccaat ctataggtag tcattcacgt 3960
tcaaaaattg ccgtggtaat gtatccagac gcaagcatga gttactcagt tgatacatta 4020
gacgctgatg tggcgcaag agaaacaacg tctgtgcttt tattagcaga aaccatacac 4080
ggggaaaaag atagagggtt ctatgctgat agaggaactg tagggagggt gatggtacct 4140
cccactgaag aagagttatt ggtattgcaa gc 4172

```

&lt;210&gt; 161

&lt;211&gt; 1389

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; (1)...(1389)

&lt;223&gt; Xaa = Any Amino Acid

&lt;400&gt; 161

```

Met Thr Glu Gln Gly Asp Gln Gly Ile Lys Val Arg Lys Leu His Gly
 1          5          10          15
Pro Arg Gly Glu Arg Gly Glu Thr Gly Pro Ala Gly Ala Val Gly Pro
 20          25          30
Ala Gly Pro Gln Gly Glu Arg Gly Ala Ile Gly Pro Ala Gly Lys Asp
 35          40          45
Gly Ala Val Gly Pro Ala Gly Pro Gln Gly Glu Arg Gly Ala Ile Gly
 50          55          60
Pro Ala Gly Lys Asp Gly Ala Val Gly Pro Gln Gly Pro Pro Gly Glu
 65          70          75          80
Arg Gly Glu Asn Gly Arg Pro Gly Arg Asp Gly Ala Val Gly Pro Gln
 85          90          95
Gly Glu Arg Gly Ala Ile Gly Pro Ala Gly Lys Asp Gly Ala Val Gly
100          105          110
Pro Gln Gly Glu Arg Gly Ala Ile Gly Pro Ala Gly Lys Asp Gly Ala
115          120          125
Val Gly Pro Ala Gly Pro Gln Gly Glu Arg Gly Glu Asn Gly Arg Pro
130          135          140
Gly Arg Asp Gly Ala Val Gly Pro Ala Gly Pro Pro Gly Glu Arg Gly
145          150          155          160
Ala Ile Gly Pro Ala Gly Arg Asp Gly Ala Val Gly Pro Ala Gly Pro
165          170          175
Pro Gly Glu Arg Gly Ala Thr Gly Ile Pro Gly Arg Asp Gly Val Asp
180          185          190
Gly Ser Val Gly Pro Gln Gly Glu Arg Gly Glu Ile Gly Arg Pro Gly
195          200          205
Arg Asp Gly Ala Val Gly Pro Ala Gly Pro Gln Gly Arg Arg Gly Ala
210          215          220
Thr Gly Arg Ala Gly Lys Asp Gly Ala Val Gly Pro Ala Gly Pro Gln
225          230          235          240
Gly Glu Lys Gly Glu Ala Gly Lys Asp Gly Ser Ile Gly Pro Gln Gly
245          250          255
Ile Gln Gly Pro Arg Gly Glu Thr Gly Pro Pro Gly Arg Asp Gly Thr
260          265          270
Ala Ala Glu Arg Gly Glu Arg Gly Phe Pro Gly Pro Pro Gly Glu Thr
275          280          285
Gly Pro Pro Gly Lys Asp Gly Val Asp Gly Ser Glu Gly Pro Gln Gly
290          295          300
Lys Arg Gly Glu Thr Gly Pro Val Gly Pro Arg Gly Glu Pro Gly Leu
305          310          315          320
Ala Gly Leu Pro Gly Arg Asp Gly Ala Ile Gly Pro Ala Gly Pro Pro
325          330          335

```

Gly	Glu	Arg	Gly	Ala	Thr	Gly	Leu	Pro	Gly	Arg	Asn	Gly	Val	Asp	Gly
			340					345					350		
Ser	Ile	Gly	Pro	Gln	Gly	Arg	Arg	Gly	Ala	Thr	Gly	Arg	Ala	Gly	Lys
		355					360					365			
Asp	Gly	Ala	Val	Gly	Pro	Ala	Gly	Pro	Pro	Gly	Glu	Arg	Gly	Ala	Thr
		370				375					380				
Gly	Ile	Pro	Gly	Arg	Asp	Gly	Val	Asp	Gly	Ser	Val	Gly	Pro	Pro	Gly
385					390					395					400
Glu	Arg	Gly	Glu	Thr	Gly	Pro	Ala	Gly	Arg	Asp	Gly	Ser	Val	Gly	Pro
				405					410					415	
Ala	Gly	Pro	His	Gly	Glu	Arg	Gly	Glu	Asn	Gly	Arg	Pro	Gly	Arg	Asp
			420					425					430		
Gly	Ala	Thr	Gly	Pro	Ile	Gly	Pro	Ala	Gly	Pro	Gln	Gly	Glu	Lys	Gly
		435					440					445			
Glu	Asn	Gly	Arg	Pro	Gly	Arg	Asp	Gly	Ala	Thr	Gly	Pro	Ile	Gly	Pro
		450				455					460				
Arg	Gly	Glu	Thr	Gly	Ala	Met	Gly	Lys	Asn	Gly	Val	Asp	Gly	Ser	Met
465					470					475					480
Gly	Pro	Gln	Gly	Arg	Arg	Gly	Ala	Thr	Gly	Arg	Ala	Gly	Lys	Asp	Gly
				485					490					495	
Ala	Val	Gly	Pro	Ala	Gly	Pro	Pro	Gly	Glu	Arg	Gly	Glu	Thr	Gly	Pro
			500					505					510		
Ala	Gly	Arg	Asp	Gly	Ser	Val	Gly	Pro	Ala	Gly	Pro	Gln	Gly	Glu	Thr
		515					520					525			
Gly	Leu	Thr	Gly	Ser	Pro	Gly	Arg	Asp	Gly	Ala	Thr	Gly	Pro	Ile	Gly
		530				535					540				
Pro	Ala	Gly	Pro	Gln	Gly	Glu	Lys	Gly	Glu	Asn	Gly	Arg	Pro	Gly	Arg
545					550					555					560
Asp	Gly	Ala	Thr	Gly	Pro	Ile	Gly	Pro	Ala	Gly	Pro	Gln	Gly	Glu	Lys
				565					570					575	
Gly	Glu	Asn	Gly	Arg	Pro	Gly	Arg	Asp	Gly	Ala	Thr	Gly	Pro	Ile	Gly
			580					585					590		
Pro	Ala	Gly	Pro	Gln	Gly	Glu	Thr	Gly	Leu	Thr	Gly	Arg	Pro	Gly	Arg
		595					600					605			
Asp	Gly	Ala	Thr	Gly	Pro	Ile	Gly	Pro	Arg	Gly	Glu	Thr	Gly	Ala	Met
		610				615					620				
Gly	Lys	Asn	Gly	Val	Asp	Gly	Ser	Thr	Gly	Pro	Gln	Gly	Arg	Arg	Gly
625					630					635					640
Ala	Thr	Gly	Arg	Ala	Gly	Lys	Asp	Gly	Ala	Val	Gly	Pro	Ala	Gly	Pro
				645					650					655	
Pro	Gly	Glu	Arg	Gly	Glu	Asn	Gly	Arg	Pro	Gly	Arg	Asp	Gly	Ala	Thr
			660					665					670		
Gly	Pro	Ile	Gly	Pro	Ala	Gly	Pro	Gln	Gly	Glu	Thr	Gly	Leu	Ala	Gly
		675					680					685			
Leu	Pro	Gly	Arg	Asp	Gly	Ala	Ile	Gly	Pro	Gln	Gly	Glu	Lys	Gly	Glu
		690				695					700				
Asn	Gly	Arg	Pro	Gly	Lys	Asp	Gly	Ala	Thr	Gly	Pro	Met	Gly	Pro	Pro
705					710					715					720
Gly	Glu	Arg	Gly	Glu	Thr	Gly	Pro	Ile	Gly	Pro	Ala	Gly	Pro	Gln	Gly
				725					730					735	
Ala	Thr	Gly	Leu	Pro	Gly	Arg	Asp	Gly	Val	Asp	Gly	Ser	Val	Gly	Pro
			740					745					750		
Gln	Gly	Lys	Arg	Gly	Leu	Ile	Gly	Arg	Thr	Gly	Arg	Asp	Gly	Ala	Ile
		755					760					765			
Gly	Pro	Val	Gly	Pro	Ala	Gly	Pro	Lys	Gly	Glu	Thr	Gly	Leu	Ala	Gly
		770				775					780				
Leu	Pro	Gly	Ile	Asp	Gly	Lys	Asp	Gly	Ser	Val	Gly	Pro	Gln	Gly	Ala
785					790					795					800
Ile	Gly	Pro	Ile	Gly	Pro	Arg	Gly	Glu	Arg	Gly	Glu	Thr	Gly	Arg	Pro
				805					810					815	
Gly	Arg	Asp	Gly	Glu	Asp	Gly	Ser	Thr	Gly	Pro	Met	Gly	Pro	Gln	Gly

Leu Arg Gly	820	Thr Gly Ala	Pro	825	Gly Pro Gln	Gly Glu	830	Arg Gly Leu
835				840		845		
Lys Gly Arg	Pro Gly Lys	Asp Gly	Glu Thr Gly	Pro Pro Gly	Arg Gln			
850		855		860				
Gly Arg Asp	Gly Ile Met	Gly Pro Arg	Gly Leu Arg	Gly Glu Lys	Gly Gly			
865		870		875				880
Ala Pro Gly	Asn Asp Gly	Leu Glu Gly	Pro Glu Gly	Arg Asp Gly	Ala Gly			
	885		890		895			
Pro Gly Pro	Ala Gly Pro	Ile Gly Pro	Gln Gly Ile	Arg Gly Leu	Lys Gly			
	900		905		910			
Gly Ile Gln	Gly Arg Pro	Gly Arg Asp	Gly Glu Met	Gly Pro Ala	Gly			
	915		920		925			
Lys Asp Gly	Ile Glu Gly	Pro Arg Gly	Gln Asp Gly	Thr Thr Gly	Ala			
	930		935		940			
Lys Gly Pro	Arg Gly Leu	Arg Gly Phe	Gln Gly Arg	Thr Gly Glu	Thr			
945		950		955				960
Gly Ala Gln	Gly Ser Arg	Gly Glu Lys	Gly Asp Arg	Gly Leu Thr	Gly			
	965		970		975			
Pro Gln Gly	Arg Asp Gly	Pro Pro Gly	Glu Glu Gly	Pro Gln Gly	Leu			
	980		985		990			
Arg Gly Glu	Arg Gly Ala	Pro Gly Pro	Arg Gly Pro	Arg Gly Ile	Arg			
	995		1000		1005			
Gly Arg Ser	Gly Pro Gln	Gly Ser Asn	Gly Val Gln	Gly Pro Arg	Gly			
	1010		1015		1020			
Pro Arg Gly	Thr Lys Gly	Arg Thr Gly	Ile Gln Gly	Leu Thr Gly	Ile			
1025		1030		1035				1040
Glu Gly Pro	Arg Gly Pro	Arg Gly Ile	Gln Gly Lys	Glu Gly Arg	Met			
	1045		1050		1055			
Gly Lys Ile	Gly His Arg	Gly Glu Lys	Gly Asp Lys	Gly Asp Arg	Gly			
	1060		1065		1070			
Glu Gln Gly	Ile Ala Gly	Ala Asp Gly	Glu Lys Gly	Pro Arg Gly	Leu			
	1075		1080		1085			
Arg Gly Ile	Arg Gly Pro	Ile Gly Ala	Pro Gly Lys	Pro Gly Thr	Glu			
	1090		1095		1100			
Gly Val Arg	Gly Pro Arg	Gly Val Arg	Gly Val Pro	Gly Tyr Pro	Gly			
1105		1110		1115				1120
Ala Gln Gly	Glu Leu Gly	Pro Gln Gly	Pro Thr Gly	Pro Gln Gly	Pro			
	1125		1130		1135			
Ala Gly Pro	Gln Gly Pro	Met Gly Arg	Thr Gly Asp	Thr Gly Pro	Met			
	1140		1145		1150			
Gly Pro Pro	Gly Ala Val	Gly Pro Arg	Gly Glu Lys	Gly Gly Arg	Gly			
	1155		1160		1165			
Arg Lys Gly	Lys Asn Gly	Pro Lys Gly	Ala Asp Gly	Lys Asp Ala	Val			
	1170		1175		1180			
Asn Ile Ile	Gln Lys Tyr	Ser Ile Thr	His Ala Arg	Ala Glu Ile	Met			
1185		1190		1195				1200
Trp Glu Gly	Asn Glu Ile	Gly Glu Ala	Tyr Ile Gly	Arg Ser Tyr	Gly			
	1205		1210		1215			
Thr Asp Thr	Ile Pro Val	Met Ile Glu	Asn Arg Ile	Gly Met Thr	Asn			
	1220		1225		1230			
Glu Asp Lys	Lys Asn Glu	Tyr Cys Ile	Gln Val Met	Thr Met His	Ser			
	1235		1240		1245			
Ile Thr Thr	Arg Gly Arg	Thr Ser Gly	Val Phe Val	Val Ser Asn	Lys			
	1250		1255		1260			
Thr Asp Tyr	Ile Leu Leu	Val Thr Leu	Leu Met Pro	Glu Ser Val	Ser			
1265		1270		1275				1280
Cys Arg Thr	Asp Val Ser	Thr Asn Ala	Arg Ser Val	Asn Ala Val	Arg			
	1285		1290		1295			
Glu Arg Glu	Ser Lys Ser	Tyr Arg Phe	Ile Arg Pro	Ser Asp Gln	Ser			
	1300		1305		1310			



WO 01/38351

PCT/US00/28888

245

Ile Gly Thr His Ser Arg Ser Lys Ile Ala Val Val Met Tyr Pro Asp  
 1315 1320 1325  
 Ala Ser Met Ser Tyr Ser Val Asp Thr Leu Asp Ala Asp Val Ala Arg  
 1330 1335 1340  
 Arg Glu Thr Thr Ser Val Leu Leu Leu Ala Glu Thr Ile His Gly Glu  
 1345 1350 1355 1360  
 Lys Asp Arg Gly Phe Tyr Ala Asp Arg Gly Thr Val Gly Arg Leu Met  
 1365 1370 1375  
 Val Pro Pro Thr Glu Glu Glu Leu Leu Val Leu Gln Xaa  
 1380 1385

<210> 162  
 <211> 201  
 <212> DNA  
 <213> SHRIMP

<400> 162  
 atggccgtaa cagagatacc ttgtggtact cggaacattg cagaagaaga cgtagaatta 60  
 gagttgatac ttgtaacagc agaagcagaa gtccgagagg cgatggcagc agctctggcg 120  
 gcagcaatca taggggctgt agtgggtgcaa atcggcagag tgttggatga agtcgtggca 180  
 gcagaggtag agttgatgtg a 201

<210> 163  
 <211> 64  
 <212> PRT  
 <213> SHRIMP

<400> 163  
 Met Ala Val Thr Glu Ile Pro Cys Gly Thr Arg Asn Ile Ala Glu Glu  
 1 5 10 15  
 Asp Val Glu Leu Glu Leu Ile Leu Val Thr Ala Glu Ala Glu Val Arg  
 20 25 30  
 Glu Ala Met Ala Ala Ala Ala Ala Ile Ile Gly Ala Val Val Val Gln  
 35 40 45  
 Ile Gly Arg Val Leu Asp Glu Val Val Ala Ala Glu Val Glu Leu Met  
 50 55 60

<210> 164  
 <211> 627  
 <212> DNA  
 <213> SHRIMP

<400> 164  
 atgcacatgt ggggggttta cgccgctata ctggcggggtt tgacattgat actcgtgggtt 60  
 atatctatag ttgtaaccaa catagaactt aacaagaaat tggacaagaa ggataaagac 120  
 gcctaccctg ttgaatctga aataataaac ttgaccatta acggtgttgc tagaggaaac 180  
 cactttaact ttgtaaacgg cacattacaa accaggaact atggaaagggt atatgtagct 240  
 ggccaaggaa cgtccgattc tgaactggta aaaaagaaag gagacataat cctcacatct 300  
 ttacttggag acggagacca cacactaaat gtaaacaaaag ccgaatctaa agaattagaa 360  
 ttgtatgcaa gagtatacaa taatacaaag agggatataa cagtggactc tgtttcactg 420  
 tctccagggtc taaatgctac aggaaggga ttttcagcta acaaatttgt attatatttc 480  
 aaaccaacag ttttgaagaa aaataggatc aacacacttg tgtttggagc aacgtttgac 540  
 gaagacatcg atgatacaaa taggcattat ctgttaagta tgcgattttc tcctggcaat 600  
 gatctgttta aggttgggga aaaataa 627

<210> 165  
 <211> 204  
 <212> PRT  
 <213> SHRIMP



atcatcaatg	acgatgataa	gcttgaccag	attgtgtgtt	tcttcaagag	aaaacacggt	1560
ttctttctga	gtgacattga	caactctcct	cttctggcaa	tggagtttct	tcttccccag	1620
aaagccatga	gcaagaagaa	ttgtgttgaa	cgcgtgaaac	cagaaacaaa	gaacattatc	1680
aggaatttga	ctggcgtaa	caccatcaag	tttgacacaa	tcatgccttt	cgccatcctt	1740
caaattgttg	tgagatatga	gaacagaaac	ctgaaattgc	ccagagatac	ggacattcta	1800
caacaaagac	tcaagaataa	cacatgggat	gcactatcaa	agggcaaatt	tgcagaaatg	1860
tggcaattta	cccacaaaga	atcactaaaa	cctcctacaa	ttgaagaatt	ggagagtatt	1920
cctcctccac	ctactcaaag	tgaagaagaa	gctgtgtgtg	ctgctgtgtc	atcaacatca	1980
tcaacaacac	cagatatggt	ttctagtcta	gaagaagggt	caacatccac	ttcgtcatct	2040
gatgaaaacc	agatagcttc	tttgaaaaat	atcaagaagc	tcttgtccat	catcacgtca	2100
acattcgcca	cgggtgtgtg	caagaacgac	accatattcg	cgtggacagt	cgttactctt	2160
gctgagcggg	tttgtgcgct	gtacaacatc	acttctcatc	cagaagagta	ctatcagcaa	2220
ataattcgtg	aagattttga	atttgaagga	ggttttgaga	agtttagaca	catgtgcgac	2280
gcaatttaacc	gagaaacttag	cataatgtga	cccaaaagtg	tgcttgaaaa	gcaatctgtc	2340
tgcagaatgg	gagttgcagc	atacgaaaa	tccatggaga	ggatcaagaa	caagacaaac	2400
agcaaattgt	gcaaaattaa	gtatgatgaa	agcacaatgg	tctacgaatt	gaacaacgat	2460
acatttaaaa	cgtttgatta	tgatgaatct	gacaagtctt	ttggaccaat	gtatgaatgc	2520
gcccccatgg	agactttcca	acgacttttt	gccagcgtca	agtctgataa	ggaagctgtt	2580
ttggcagaca	agaagtcgga	gaagaggagg	aaactctatc	aacaaaaaca	agaatatcta	2640
agaaaatgtg	acaacgacga	cgtttctgct	cgccagatcc	tgaacaatgt	ggccagtaac	2700
gaaagcgatg	aagaaagtga	tgaagagagt	gcgatgagg	agaattatgg	agctgccaag	2760
ggaggtgcaa	caggtgatta	ttatggtggt	gatgatgaag	atgattgtta	tggttttcta	2820
ggcgaatttg	gttctagtga	tgatgaaaat	gtaccatctg	acaatgctag	tagtattaat	2880
aacgtacaag	atgatgtgtt	tagggatggt	aatttcatca	aaacattcaa	ctttagatcc	2940
agtttatgtc	atcgccaaaa	gtatgtttca	actgtcattg	tggaggaaat	ggagaaaaat	3000
ttgtgtgatg	tactaacatt	ggacaattct	gcagctgaat	ctggtgatat	tttgaaagaa	3060
attaatagaa	gatctttgag	aatgaggaat	tgggtagtgc	cttttactat	gcctgtacga	3120
gaaattgtca	agcctaattg	caatagtga	gacggaaccg	ctaacagcaa	caacaatatc	3180
cctccctttt	gttcttgtgc	ttctcttaat	aacttcaaga	gcgattctcc	ccttagtagt	3240
aacaatacca	tgtctaacga	aaagtgcata	aaactactcc	caattcctag	ttctaaacat	3300
ctgaaagatc	tgactgtagc	tctccgtttc	aacacaatgg	catgtgaaag	gagatacttt	3360
agtgtgattg	ctgcagcttt	aggatttggg	aaaaaggaca	aagttaattg	taatattagg	3420
tctatttttag	ataataagag	gtgggatgcc	ataaaacagt	gtaaaattggc	aggaaaaagt	3480
ctatcttcag	cattaccttt	gggtatctat	gaaaatgtga	tcagtgaaga	taacaaactc	3540
attaacacgt	ttagacctag	aagtttagcc	agattggcat	gttcatcggg	agggtgatgg	3600
gtatcagata	agagtgttaa	taatggtttc	ttttctggta	tttgggcatt	gtgtgcgaat	3660
caagattttag	agtctgttgt	gctgggttct	acagttgttg	atcctctaaa	accaactaaa	3720
gtgttttaac	aatcgctttc	tgagaaggaa	cttaaaagaa	aacgtcaaca	gatgtgttta	3780
gatgcagcaa	attatttcaa	ggaccataac	gtttcaaaaac	ttaacatata	cgagtgtctt	3840
aaaatgatgg	aagaatgtat	catgcgtaca	gctttgaatg	gaaaaacaag	taatgattct	3900
gagttctttt	caaatttgat	aacaagatac	ggttctggaa	ccaatagtcc	agcttctaga	3960
ctgtggacaa	ttctagagac	tgtaggggag	tgctttaata	acagccttcc	tattgattgg	4020
ggaagtttag	ttaaggattg	ggacggtagt	gacatgctaa	atttaaaggc	agggtgtgtca	4080
aatgtggacg	aatctggcgc	cgtatttgag	ctatcagaat	ttctgggcgt	tagcgcgagg	4140
gcattttttg	gtaaagatct	ggacacaaat	ttggatgctg	atacgtggga	atgtcttttg	4200
aatgacgaca	ataaggactg	gaaagcgag	gtcgccaagg	cctatgagtt	tgctctcaaa	4260
gacaacgaca	ttagatctgt	tgaaaatttc	ataaattcaa	gcaacttgct	aacaaataac	4320
aacgtaatta	agaaattgaa	gataaaaccc	acccttagca	atgatgttag	gcatcaaatt	4380
tggtttgaag	acgaatatta	tccacgaaac	aagtctactt	tgcgagtcg	ggcagagtgg	4440
atggctgcaa	cagaagaggt	tctcaaggaca	gaaattgtct	tctcttgtgt	gctagcaatg	4500
gtcgtatgtg	atcgatatcat	gatgcaggga	gaaagtgtgc	gagaaattgc	aactgctcct	4560
ttgcgtctat	ctgtggataa	aatggtacca	ctcattcgat	gctttaaaat	cactagcaag	4620
tggtgcagct	gtacaggcaa	gggagattct	cccaaaaagg	ccgacgctag	cataaaagaa	4680
ggtagatttt	acgatattga	agaagatcct	ctccactttt	accgttttgc	cgcatatgtt	4740
attggacaag	ttgcaagtaa	tgatattgtc	attgaagaaa	tgacccgaaa	gattctcatg	4800
tcgttttgatt	ttaattggatt	tgatactatg	aattggttgc	aatttatcac	ctatagattt	4860
tctcacgtcc	taatgggacg	gcgaagcagg	cttctttcta	ggcccccttc	actagttaag	4920
aatttggtta	gtgtttcctc	tttgcccgac	aaaaatagcg	aaaaaagcaa	tgatatgtat	4980
gaaaaacgtg	ttgggaagggt	aatgaaacgt	attgcaaggc	ttgttttagt	aaaagcggca	5040
gactctgtgc	gtgcttcttc	aaatgatttg	ttggattggt	gtatttttga	cgttaatgat	5100
gtcagtgtta	aatcttttga	cgagttccgc	gccaaagactc	gccaaagaact	gcaagagact	5160

agaatcgata	ctaactacaa	tctggttagt	aattcctgta	caactgcccc	actcgctgct	5220
gtagaaaagt	cctctagaat	catcaacact	aacatttctt	tccacaacat	tcttgccggt	5280
caagctaaag	taatggacgc	taacgaagaa	gcatttatcg	atccttctct	agaagagatt	5340
aacaaggagg	ataatagtgg	tgcaaaaacaa	atgacaggaa	agggtggaag	taatagggga	5400
cgatcaaaga	aatctggcgg	aggaggtttt	aataacgcgg	gtggttttta	caatgatgat	5460
tctagtcggg	gatcatcatc	cgtagttgat	gaggactcga	gatcccgcac	gggttttcagc	5520
cagatacaca	tggacgccag	aaacgaagaa	gacagagaaa	gtggcttggt	ttcgtacgat	5580
ggctatgtac	ttaaccgaat	taagaacatg	atcacacaaa	atcagataaa	taatgacatt	5640
gtgaaagtaa	tttctgacat	tgagaacttt	tttaagattt	gtgttccttt	ctcgaaaaaa	5700
gagtatgctt	tgtacggtgt	cactgaaact	gcgttaagt	ctggaatgga	tgccattgaa	5760
aggtggaata	aggcagttga	ggaagaaact	aacaagataa	gaaaagagt	ccgcgatttg	5820
actgatactg	gaagcggtta	tgatatgaac	atcatatgtc	ctggcgattta	catgtcttct	5880
gttggcgagg	gaggaaatgg	tgggtgtggg	ggtggatcat	cctcatcagg	tcaccttctc	5940
tctaataata	ataatgaagc	taaccagacc	aatgaaattt	ctgaagacca	attgaaacat	6000
gaaggaagt	attgctcggt	ttggtttaac	ttctacaaga	aagttgtcaa	ttcttcggaa	6060
aagaagcaag	gaaagggcag	tgttttggca	aatacaggcc	atgagggtag	aatagttggc	6120
cgtcccttga	gaacttttat	ccagtacaag	gggaaagggt	ttgctgaaac	aaaggtcctg	6180
acacgctatt	tctccaatca	tatttctgac	tcgtactggt	ctcaagttat	gccaatttgt	6240
tacattaaga	atatggccct	gggagatgag	gacaagtcaa	aaaagaagt	tggaaagaga	6300
ccctggaaga	actttaacaa	taactctaata	agcagtagta	attcatcggt	gaaatatggt	6360
tcaattcaag	atttgaggaa	aaaagactct	ttaaagaatg	ttcctatggg	ttatgatgaa	6420
gatttattgt	ctctttatga	tgatttctta	actacttcca	ctgaaaaatt	agaaaaacatt	6480
aagattgtta	acgattctaa	agacgcgtac	gttatcttgg	gctcttctaa	ccaatcttca	6540
tttgaccaga	ctttctccca	gcaatacttt	acccaccaaa	aaatatccaa	tatcaacacc	6600
tataaaagtt	tgggtaagat	gtggaactgt	acaatggta	tgtcccctaa	gaaccagata	6660
gttttgctta	aaaaattgct	gtttaaaaat	ctaaacattt	tgtggattaa	attgtacgag	6720
cgtcacatta	gcgttttgtg	taactgggga	tgtattcatc	ccaatagttc	aaagatatgc	6780
cactttgaaa	tgacaaaagaa	taatgctcca	tgtggcggtta	ccgattcaaa	ccctccactt	6840
tcagtatacc	attctgggtt	cctgagtggt	gaagactatg	gccaactact	gaaggacact	6900
ttccctctta	tgaatctgca	ccgcactttc	tctgctaaat	ctaaagacaa	taattcctct	6960
gaccttctc	ccgaaaaaat	ttctgcagct	agtttggtta	aggctgttta	cgcccgtgaa	7020
gttttgctt	catgtttaga	tcccaggggt	aatttctgta	cgtcttggt	cactaatggt	7080
tgttcagtg	tgtttacacc	agggacaaat	ataagacgag	gaggagattt	tttcaacaaa	7140
tcttggtatc	ggcaacaaga	caatgattac	tgtttcattg	gtaaagaaga	aactaagaaa	7200
tgtcccaact	ttgtttcatc	agaaattgaa	attgtcagta	tccttaaaac	tgccgtgttt	7260
ttaagtacca	actctgatgg	ccataagcgc	gtgcttcgtg	tcatcaatta	caataaggac	7320
cattctggtc	tatatgctgg	cattgatact	ggctgcgcag	acgatgaaga	tgatgatgac	7380
gatcaagggt	gtacagataa	aacttgcctt	ctgcaagaag	attcaatgga	tgctaaggag	7440
atgttaattt	ctatgcgggtc	tgatcattat	gggaaaagtc	tggacgaatc	tagtctggcc	7500
attaagaagg	ataattttta	cttttttagca	ggaacagata	agggttttcta	cttgataat	7560
tccttcttta	actcccctgt	gcagggtaaa	tttgtcgctc	ctagagggaac	aaaaatcttt	7620
aagaagtgtt	gcgatttctt	attgaacaaa	ggcacaggag	gagtatttgc	ccgcatattc	7680
tttactgatt	gggcctgtat	tgtttcatca	tcaaagggtta	agaataacaa	gaaggcgatc	7740
gagtctactc	tccaaattag	aaacggggga	tgtttcagcg	agcgattaac	tccttcaatg	7800
tttgacaatg	agtcagaaca	aggcgagttg	ttccacgata	gatactgtcc	cgattttttg	7860
tcagactaca	acaagcagaa	tattttttcg	gaacaagcat	acaaatgctc	atttttagct	7920
aatccagtg	gtcctgccaa	gaatatgctc	aaaagagcca	aaaatatacg	tctttgtatt	7980
acaaatgcag	gaactgctct	catttctaaa	attatggctg	aagttgaaaa	aatgggaaat	8040
gctagaacgt	ttattagtaa	tggtagacga	attcccttca	ggttagctga	aaacactgcc	8100
tgtattagcg	ttgataataa	caggtacttt	ttgattgatg	gtacttatct	tctaggagga	8160
cgccttgaag	ggataaaatt	ggtcacggac	atgtatacaa	ggtgtaaaat	aaaggcgagaa	8220
aaacacgtta	ttttgaattc	tttattctca	accgaattta	tttctgctgc	tctagcttcg	8280
tccatggaag	gcactacaat	gggtagagga	ctttgtttta	tcgaacacgt	atcttatatg	8340
aaaaataccg	actctgtcag	taatatgaac	aaaaactttt	ggtctatggc	tgaagatcag	8400
gaagaaaccg	atgaaaatga	ggatgatgat	gacgaaaatg	aagaagatga	ggatgagaac	8460
gaagaaaaca	cggaaaatac	atcggttgta	aagtacgaac	ctgtatcaaa	aacagcattc	8520
agttcttctc	taaaacctcc	tatcaatttt	aattgctgatg	aagatttatat	atttttatca	8580
attttatagc	aacttgctaa	agccactagc	gattgtgaaa	cggcttcttc	ctcctcctcc	8640
tcctcctcct	cctcctcttc	ttcttcaaaa	catagtagta	gtagtagtag	tagtaataag	8700
aagaggaagc	aaaaggatga	tgtaatttct	acaactacag	cccttcatgc	gctaagaaaa	8760
tgttacatct	catgtgttga	ccaaaaaact	ggcatgcccc	gaatggatgt	cgtgtatctt	8820

ttacgtggcc	taatgaactt	tggaggtatg	tgcacagcca	ttgcttcagg	agatggagag	8880
aaagcccacc	acatggttca	aactctttgt	tccgttgcc	tgaatatgtc	cacaaaaact	8940
gctgttgtat	ttgtgggaac	aaagggaac	aatttaaaga	ccactcttgt	cgatttgtgt	9000
aagaggactt	ggttcgaaag	gtttacaaat	attaacgtta	cggctctcaa	taatgctggg	9060
gattcttctt	catctactca	agcaaatttg	gcttcctttg	ctggcaaaaa	gggtatcgtg	9120
attattgacg	aagttggcca	ccaaggttca	tttggctcaa	agaagtcac	gagcgaagac	9180
gataaggacg	agtctgcttc	cagaagtgg	aatgtcgatt	ttggcggcag	tgggggagaa	9240
atgaatagt	ttgacatcaa	tgaagcaaga	aacgcgtacg	gtgacggagg	aaactctaag	9300
atcggtttta	gtaatatata	ccgtttaatg	accgaatcaa	aactaaaagt	atgcgaccaa	9360
gagtacgatt	ttatttctga	actcaaacac	gaaaagaata	ggaaaaatgc	ttgtaatgat	9420
acaaaaaaac	gtaaaagagg	tggcgaaaat	gaagatgaag	gggtagaatg	tgaggaaatt	9480
gagagaaaacg	acggtaaaaa	tgacgaaaat	ggtgtccgca	taaaggatcc	tatcaatatt	9540
tctttctttg	ccagaaaagc	tactggtgg	aattgttctt	ctggtgttgt	ttcaactacc	9600
tttaaagaga	aaaattattgt	gtataatatg	ctccatagag	gcgccatgcc	tttctctatt	9660
aaagactgca	cagattctcc	ttggcttaac	gaaaccgatg	ctgtgtacag	gcactgtaag	9720
aaacctatcg	aatatgaagg	caaattctct	aaatccgaag	taaaaactgc	cttgaagtgc	9780
atattaggt	aatttgatc	caaaatatgc	gataacgaat	catttgaatc	cattattgat	9840
gaaaactgcc	aggttaataa	tcttcattcc	tggaacgatt	gtaaaaga	tatagatgaa	9900
tggaatgaga	aatttatgag	caagaacaag	aaaaataagc	agaatatgaa	aattgaagac	9960
aaagttgatg	cgattatgaa	cataatacag	aaaaacaatg	gccttttgaa	atggaataca	10020
tcatttgatc	gcgacggttc	gcctgtttta	gtctgcaacc	ctgccactga	aagggtttcc	10080
gagatgatca	cgatctctt	gtctgcccag	gacatgctcg	aaattaaaaa	atacctgggg	10140
gataattgcc	tgctgactaa	cgggggcggt	aaaaagtcag	ttattgatgg	taatacatcc	10200
gcccctgggtg	tattgattgc	gtaccattgc	gtttacactg	gaaaaatttc	tgatgatctt	10260
tcaaaaacaa	ctaccaccgt	tttacttccc	cctcccaaga	aacaacactt	tgtagctgtc	10320
gatgatgctg	ccgagaaggc	tcttctgggg	cctactctgt	cgaatattaa	tattgacagt	10380
attcgtaaca	tcaagactat	ttctcgcaag	ttatcgctca	taataaagga	cccagaagct	10440
gcaaaactat	tagtggatag	agatctggac	tttatgaaca	tgtacgaacg	ttatgacgca	10500
tctttattcg	atgtggttaa	gaaaccgtca	aaatatagtt	ttcctggatt	tacttctgat	10560
ggttcagtgg	ttctgtcaac	ttccacttct	gactgcgaaa	atgtcctttc	ttgcttaaag	10620
aagcgtattg	agaaggataa	gatgtcgggt	aagaattctg	gaccccttat	tcgcattgtg	10680
atggataaaa	atttgccttc	tgacgaaaag	gacgactctt	cctctaattc	atcaaaaaat	10740
acgtcttctt	tacctaatac	agacgataac	agcagtgata	ttgcaaactt	tttaagtgtt	10800
tttgagagaa	ataggcaaca	aagttcacaa	ttttcctttg	cttctaactc	tagtggtgga	10860
ggagacagta	ataaagaggc	ttgtttcaat	gtcgatacgc	ctaaaagaag	gcaattgggtg	10920
tctgcactcc	aaaaacataa	cagtgcagg	tcttcttcca	ttattaccga	aatcgctaag	10980
gcccctcccc	aaaagaatga	tgtgtccagt	tctataacca	aacatatgct	tccgggccaa	11040
ttccctccca	gtttattaaa	gaatatgact	tcaccccaaa	acagcgtcat	gattagaggg	11100
attttccaac	agggcgcaaa	aagcagcatt	actgtgtctc	ctattatgat	gtccaacagt	11160
tacatcttct	cattctttgt	cgacgaagct	atgtctaaaa	gacttattgt	ttttccttgt	11220
gatacaacat	ttgtctttga	gaataagaat	gaggatgtta	agaaaattat	cgggcttttg	11280
gatagaggaa	tgaagtatat	ccattcatct	ttaatgatgg	aaagatgtat	caaatttgga	11340
aagcatggaa	taaaacagcg	tcaacacgaa	tttaatcatc	acaagaaagc	atggaatgac	11400
tttagtgggc	attccagtga	caacaaaaag	aaggatagaa	ttagtgcagt	atcatccgtt	11460
cttccatcag	ttttaatgaa	aaacttgatc	agaaacaagg	tcctagaatt	gagagacgta	11520
aaatcagttt	cccgtttaga	ggagaatact	aacacctttt	tccatttgta	cacttcaatg	11580
agtcttttgt	ctaaggctgc	aacaaattac	ggagaatctt	cttcttcttc	tgctactatc	11640
actgaagtag	aagaagacaa	tagttgtgat	gctgaggaac	aacaattgcg	ccgtaagaaa	11700
ccagcaaat	acgagtcatt	gtgcaataa	ttaccatcac	ctcttcaaat	gtgccagatt	11760
aatcctaatt	ctttgaattac	aatggctatg	aatattgctc	gttctagaca	aggcgcatgg	11820
gctcaactaa	atagcatgct	caattcagtt	ttatttgtag	aaatgccctt	tgtaagacc	11880
acaagattct	ttgggagaga	ttttaacatc	aagatgcact	ctcctgccac	aaagaatagg	11940
ccagccatca	attttgacaa	ttgtattgg	atgagtttac	caaatcctga	tatggatgtt	12000
gtaggatatg	ataaggaagg	ggaattaata	ggagttgggt	cttcactaac	aaaacatttg	12060
tgtgatgcct	gggtttcaat	ggatgttag	gatttgatgt	attcttgcca	ccatttacac	12120
atgtgttttg	aaatggctct	ccagtatact	gaatgtaaga	ggagactttc	ctcataaaa	12180
acactaaaga	gtgataaaac	tggtgttgat	tatgttgctg	taatgttagc	ctgtatgggtg	12240
taccaattga	tggttagtaa	tctgaaatac	cctgtgtttt	tgctctcttc	atcccaaacg	12300
agggcaata	cagaggatat	tgcggatgag	aatcaagttt	cttcactatc	tggtcccatg	12360
tttctggcaa	tggttgatgaa	taaaccgttg	catgctctta	gacactctac	caatttagct	12420
cttcctaattg	cttctcaaaa	atctgacct	tctgatattg	tcaagtacat	tgtaatgaac	12480

caatgggggtt tgagacttaa ccctgattat ctgtgcccaa actgtgtaaa acatgttctt 12540  
tga 12543

<210> 167  
<211> 4152  
<212> PRT  
<213> SHRIMP

<400> 167

Met	Phe	Lys	Ala	Asn	Val	Leu	Asn	Leu	Gly	Gly	Gly	Lys	Phe	Leu	Glu
1				5					10					15	
Ser	Asp	Val	Arg	Asp	His	Leu	Ile	Lys	Cys	Ala	Asn	Gln	Met	Lys	Glu
			20					25					30		
Glu	Pro	Thr	Thr	Leu	Arg	Ile	Cys	Leu	Ser	Asn	Lys	Leu	Pro	Glu	Tyr
		35					40					45			
Asp	Asn	Arg	Arg	Leu	Pro	Leu	Leu	Leu	Leu	Asn	Glu	Gly	Glu	Gln	Ile
	50					55				60					
Leu	Val	Thr	Asp	Asn	Leu	Thr	Lys	Asn	Gly	Asn	Pro	Leu	Val	Lys	Gln
65					70					75					80
Met	Gly	His	Leu	Ala	Val	Gln	Asp	Arg	Val	Gly	Gly	Asp	Gly	Ser	Val
				85					90					95	
Asn	Pro	Asn	Asn	Leu	Leu	Tyr	Ala	Gly	Cys	Asn	Val	Val	Glu	Tyr	Asp
			100					105					110		
Thr	Val	Asn	Arg	Gly	Asn	Asp	Gly	Lys	Leu	Ile	Met	Tyr	Ser	Gln	Pro
		115					120					125			
Ala	Thr	Leu	Lys	Asp	Val	Ala	Lys	Ser	Lys	Lys	Lys	Gly	Met	Tyr	Lys
	130					135					140				
Val	Lys	Lys	Val	Pro	Glu	Ile	Thr	Gly	Asp	Gln	Phe	Leu	Asp	Lys	Leu
145					150					155					160
Asn	Glu	Arg	Ser	Cys	Gln	Asn	Glu	Asn	Arg	Arg	Met	Asp	Glu	Glu	Gly
				165					170					175	
Pro	His	Val	Gly	Thr	Gly	Lys	Leu	Leu	Arg	Glu	Leu	Ile	Ile	Met	Met
			180				185						190		
Arg	Leu	Tyr	Glu	Glu	Glu	Thr	Ser	Ser	Ala	Glu	Lys	Leu	Cys	Val	Thr
		195					200					205			
Pro	Ala	Phe	Arg	Glu	Phe	Leu	Gly	Cys	Gly	Arg	Thr	Ala	Thr	Asp	Val
	210					215					220				
Pro	Val	Phe	Lys	Val	Ala	Phe	Ile	Thr	Asn	Ala	Ser	Leu	Met	Gly	Leu
225					230					235					240
Lys	Val	Ile	Phe	Tyr	Pro	Thr	Ile	Glu	Glu	Arg	Leu	Ala	Ala	Val	Ser
			245						250					255	
Asp	Thr	Glu	Asn	Val	Val	Leu	Leu	Lys	Ser	Ile	Leu	Lys	Val	Gln	Leu
			260					265					270		
Glu	Leu	Leu	Ser	Glu	Cys	Met	Pro	Arg	Ile	Val	Glu	Arg	Val	Glu	Ser
		275					280					285			
Met	Ile	Lys	Lys	Thr	Val	Ala	Cys	Phe	Lys	Ile	Asp	Ile	Gly	Gly	Ser
	290					295					300				
Asp	Asn	Trp	Asn	Leu	Pro	Gly	His	Cys	Lys	Val	Ser	Asp	Thr	Ala	Phe
305					310					315					320
Pro	Tyr	His	His	Ala	Gln	Leu	Val	Gly	Glu	Lys	Lys	Asn	Ile	Leu	Ser
				325					330					335	
Ile	Ser	Asn	Glu	Asn	Met	Val	Thr	Ser	Leu	Gly	Val	Val	Lys	Ala	Asp
			340					345					350		
Arg	Ala	Glu	Glu	Trp	Met	Cys	Lys	Thr	Leu	Glu	Ser	Phe	Glu	Lys	Lys
		355					360					365			
Cys	Leu	Tyr	Leu	Glu	Asn	Leu	Met	Gly	Ser	Met	Ala	Asn	Thr	Asp	Asp
	370					375					380				
Trp	Arg	Arg	Lys	Ile	Leu	Phe	Ser	Glu	Leu	Gly	Pro	Glu	Met	Pro	Tyr
385					390					395					400
Arg	Asn	Lys	Ser	Leu	Ile	Met	Asp	Gln	Asp	Phe	Cys	Thr	Ile	Gly	Met
				405					410					415	

Cys	Tyr	Lys	Phe	Leu	Ala	Glu	Gly	Gly	Gly	Leu	Leu	Leu	Thr	Lys	Thr
			420					425					430		
Asn	Ala	Thr	Leu	Leu	Lys	Glu	Lys	Met	Ala	Cys	Lys	Gly	Leu	Asp	Asp
		435					440					445			
Ser	Gly	Asp	Gly	Asp	Asp	Glu	Glu	Glu	Asp	Asn	Glu	Glu	Gly	Gly	Ser
	450					455				460					
Gly	Gly	Lys	Ser	Gly	Gly	Gly	Ser	Gly	Asp	Glu	Asn	Asn	Ile	Asn	Lys
465					470					475					480
Pro	Pro	Pro	Ala	Pro	Lys	Gln	Ile	Pro	Pro	Leu	Ala	Ala	Asn	Val	Tyr
				485				490						495	
Asn	Ser	Ile	Ile	Asn	Asp	Asp	Asp	Lys	Leu	Asp	Gln	Ile	Val	Cys	Phe
			500					505					510		
Phe	Lys	Arg	Lys	His	Gly	Phe	Phe	Leu	Ser	Asp	Ile	Asp	Asn	Ser	Pro
		515						520				525			
Leu	Leu	Ala	Met	Glu	Phe	Leu	Leu	Pro	Gln	Lys	Ala	Met	Ser	Lys	Lys
	530					535					540				
Asn	Cys	Val	Glu	Arg	Val	Lys	Pro	Glu	Thr	Lys	Asn	Ile	Ile	Arg	Asn
545					550					555					560
Leu	Thr	Gly	Val	Asn	Thr	Ile	Lys	Phe	Asp	Thr	Ile	Met	Pro	Phe	Ala
				565					570					575	
Ile	Leu	Gln	Ile	Val	Val	Arg	Tyr	Glu	Asn	Arg	Asn	Leu	Lys	Leu	Pro
			580					585					590		
Arg	Asp	Thr	Asp	Ile	Leu	Gln	Gln	Arg	Leu	Lys	Asn	Asn	Thr	Trp	Asp
	595						600					605			
Ala	Leu	Ser	Lys	Gly	Lys	Phe	Ala	Glu	Met	Trp	Gln	Phe	Thr	His	Lys
	610					615					620				
Glu	Ser	Leu	Lys	Pro	Pro	Thr	Ile	Glu	Glu	Leu	Glu	Ser	Ile	Pro	Pro
625					630					635					640
Pro	Pro	Thr	Gln	Ser	Glu	Glu	Glu	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ser
				645					650					655	
Thr	Ser	Ser	Thr	Thr	Pro	Asp	Met	Val	Ser	Ser	Leu	Glu	Glu	Gly	Ala
			660					665					670		
Thr	Ser	Thr	Ser	Ser	Ser	Asp	Glu	Asn	Gln	Ile	Ala	Ser	Leu	Glu	Asn
		675					680				685				
Ile	Lys	Lys	Leu	Leu	Ser	Ile	Ile	Thr	Ser	Thr	Phe	Ala	Thr	Gly	Ala
	690					695					700				
Asp	Lys	Asn	Asp	Thr	Ile	Phe	Ala	Trp	Thr	Val	Val	Thr	Leu	Ala	Glu
705					710					715					720
Arg	Phe	Cys	Ala	Leu	Tyr	Asn	Ile	Thr	Ser	His	Pro	Glu	Glu	Tyr	Tyr
				725					730					735	
Gln	Gln	Ile	Ile	Arg	Glu	Asp	Phe	Glu	Phe	Glu	Gly	Gly	Phe	Glu	Lys
		740						745					750		
Phe	Arg	His	Met	Cys	Asp	Ala	Ile	Asn	Arg	Glu	Leu	Ser	Ile	Tyr	Val
		755						760				765			
Pro	Lys	Ser	Val	Leu	Glu	Lys	Gln	Ser	Val	Cys	Arg	Met	Gly	Val	Ala
	770					775					780				
Ala	Tyr	Glu	Asn	Ser	Met	Glu	Arg	Ile	Lys	Asn	Lys	Thr	Asn	Ser	Lys
785					790					795					800
Leu	Cys	Lys	Ile	Lys	Tyr	Asp	Glu	Ser	Thr	Met	Val	Tyr	Glu	Leu	Asn
				805					810					815	
Asn	Asp	Thr	Phe	Lys	Thr	Phe	Asp	Tyr	Asp	Glu	Ser	Asp	Lys	Ser	Phe
			820					825					830		
Gly	Pro	Met	Tyr	Glu	Cys	Ala	Pro	Met	Phe	Gln	Arg	Leu	Phe	Ala	Ser
		835					840					845			
Val	Lys	Ser	Asp	Lys	Glu	Ala	Val	Leu	Ala	Asp	Lys	Lys	Ser	Glu	Lys
	850					855					860				
Arg	Glu	Lys	Leu	Tyr	Gln	Gln	Lys	Gln	Glu	Tyr	Leu	Arg	Lys	Cys	Asp
865					870					875					880
Asn	Asp	Asp	Val	Ser	Ala	Arg	Gln	Ile	Leu	Asn	Asn	Val	Asn	Glu	Ser
				885					890					895	
Asp	Glu	Glu	Ser	Asp	Glu	Glu	Ser	Asp	Asp	Glu	Glu	Asn	Tyr	Gly	Ala

WO 01/38351

PCT/US00/28888

252

900				905				910							
Ala	Lys	Gly	Gly	Ala	Thr	Gly	Asp	Tyr	Tyr	Gly	Gly	Asp	Asp	Glu	Asp
915				920				925							
Asp	Cys	Tyr	Gly	Phe	Leu	Gly	Glu	Phe	Gly	Ser	Ser	Asp	Asp	Glu	Asn
930				935				940							
Val	Pro	Ser	Asp	Asn	Ala	Ser	Ser	Ile	Asn	Asn	Val	Gln	Asp	Asp	Val
945				950				955				960			
Phe	Arg	Asp	Val	Asn	Phe	Ile	Lys	Thr	Phe	Asn	Phe	Arg	Ser	Ser	Leu
965				970				975				980			
Cys	His	Arg	Gln	Lys	Tyr	Val	Ser	Thr	Val	Ile	Val	Glu	Glu	Met	Glu
980				985				990				995			
Lys	Asn	Leu	Cys	Asp	Val	Leu	Thr	Leu	Asp	Asn	Ser	Ala	Ala	Glu	Ser
995				1000				1005				1010			
Gly	Asp	Ile	Leu	Lys	Glu	Ile	Asn	Arg	Arg	Ser	Leu	Arg	Met	Arg	Asn
1010				1015				1020				1025			
Trp	Val	Val	Pro	Phe	Thr	Met	Pro	Val	Arg	Glu	Ile	Val	Lys	Pro	Asn
1030				1035				1040				1045			
Val	Asn	Ser	Glu	Asp	Gly	Thr	Ala	Asn	Ser	Asn	Asn	Asn	Ile	Pro	Pro
1045				1050				1055				1060			
Phe	Cys	Ser	Cys	Ala	Ser	Leu	Asn	Asn	Phe	Lys	Ser	Asp	Ser	Pro	Leu
1060				1065				1070				1075			
Ser	Ser	Asn	Asn	Thr	Met	Ser	Asn	Glu	Lys	Cys	Ile	Lys	Leu	Leu	Pro
1075				1080				1085				1090			
Ile	Pro	Ser	Ser	Lys	His	Leu	Lys	Asp	Leu	Thr	Val	Arg	Phe	Asn	Thr
1090				1095				1100				1105			
Met	Ala	Cys	Glu	Arg	Arg	Tyr	Phe	Ser	Asp	Val	Thr	Ala	Ala	Leu	Gly
1110				1115				1120				1125			
Phe	Val	Lys	Lys	Asp	Lys	Val	Asn	Gly	Asn	Ile	Arg	Ser	Ile	Leu	Asp
1125				1130				1135				1140			
Asn	Lys	Arg	Trp	Asp	Ala	Ile	Lys	Gln	Cys	Lys	Leu	Ala	Gly	Lys	Cys
1140				1145				1150				1155			
Leu	Ser	Ser	Ala	Leu	Pro	Leu	Gly	Ile	Tyr	Glu	Asn	Val	Ile	Ser	Glu
1155				1160				1165				1170			
Asp	Asn	Lys	Leu	Ile	Asn	Thr	Phe	Arg	Pro	Arg	Ser	Leu	Ala	Arg	Leu
1170				1175				1180				1185			
Ala	Cys	Ser	Ser	Gly	Gly	Asp	Gly	Val	Ser	Asp	Lys	Ser	Val	Asn	Asn
1190				1195				1200				1205			
Gly	Phe	Phe	Ser	Gly	Ile	Trp	Ala	Leu	Cys	Ala	Asn	Gln	Asp	Leu	Glu
1205				1210				1215				1220			
Ser	Val	Val	Leu	Gly	Ser	Thr	Val	Val	Asp	Pro	Leu	Lys	Pro	Thr	Lys
1220				1225				1230				1235			
Val	Phe	Asn	Gln	Ser	Leu	Ser	Glu	Lys	Glu	Leu	Lys	Glu	Lys	Arg	Gln
1235				1240				1245				1250			
Gln	Met	Cys	Leu	Asp	Ala	Ala	Asn	Tyr	Phe	Lys	Asp	His	Asn	Val	Ser
1250				1255				1260				1265			
Lys	Leu	Asn	Ile	Tyr	Glu	Cys	Phe	Lys	Met	Met	Glu	Glu	Cys	Ile	Met
1270				1275				1280				1285			
Arg	Thr	Ala	Leu	Asn	Gly	Lys	Thr	Ser	Asn	Asp	Ser	Glu	Phe	Phe	Ser
1285				1290				1295				1300			
Asn	Leu	Ile	Thr	Arg	Tyr	Gly	Ser	Gly	Thr	Asn	Ser	Pro	Ala	Ser	Arg
1300				1305				1310				1315			
Leu	Trp	Thr	Ile	Thr	Val	Arg	Glu	Cys	Phe	Asn	Asn	Ser	Leu	Pro	Ile
1315				1320				1325				1330			
Asp	Trp	Gly	Ser	Leu	Val	Lys	Asp	Trp	Asp	Gly	Ser	Asp	Met	Leu	Asn
1330				1335				1340				1345			
Leu	Lys	Ala	Gly	Val	Ser	Asn	Val	Asp	Glu	Ser	Gly	Ala	Val	Phe	Glu
1350				1355				1360				1365			
Leu	Ser	Glu	Phe	Leu	Gly	Val	Ser	Ala	Arg	Ala	Phe	Phe	Gly	Lys	Asp
1365				1370				1375				1380			
Leu	Asp	Thr	Asn	Leu	Asp	Ala	Asp	Thr	Trp	Glu	Cys	Leu	Leu	Asn	Asp
1380				1385				1390				1395			



Asp Asn Lys Asp Trp Lys Ala Gln Val Ala Lys Ala Tyr Glu Phe Ala  
 1395 1400 1405  
 Leu Lys Asp Asn Asp Ile Arg Ser Val Glu Asn Phe Ile Asn Ser Ser  
 1410 1415 1420  
 Asn Leu Leu Thr Asn Asn Asn Val Ile Lys Lys Leu Lys Ile Lys Pro  
 1425 1430 1435 1440  
 Thr Pro Ser Asn Asp Val Arg His Gln Ile Trp Val Glu Asp Glu Tyr  
 1445 1450 1455  
 Tyr Pro Arg Asn Lys Ser Thr Leu Arg Ser Arg Ala Glu Trp Met Ala  
 1460 1465 1470  
 Ala Thr Glu Glu Val Leu Lys Thr Glu Met Ser Leu Ser Cys Val Leu  
 1475 1480 1485  
 Ala Met Val Ala Met Tyr Arg Ile Met Met Gln Gly Glu Ser Val Arg  
 1490 1495 1500  
 Glu Ile Ala Thr Ala Pro Leu Arg Leu Ser Val Asp Lys Met Val Pro  
 1505 1510 1515 1520  
 Leu Ile Arg Cys Phe Lys Ile Thr Ser Lys Trp Cys Ser Cys Thr Gly  
 1525 1530 1535  
 Lys Gly Asp Ser Pro Lys Lys Ala Asp Ala Ser Ile Lys Glu Gly Arg  
 1540 1545 1550  
 Phe Tyr Asp Ile Glu Glu Asp Pro Leu His Phe Tyr Arg Phe Ala Ala  
 1555 1560 1565  
 Tyr Val Ile Gly Gln Val Asn Asp Ile Val Ile Glu Glu Met Thr Arg  
 1570 1575 1580  
 Lys Ile Leu Met Ser Phe Asp Phe Asn Gly Phe Asp Thr Ser Asn Trp  
 1585 1590 1595 1600  
 Leu Gln Phe Ile Tyr Phe Ser His Val Leu Met Gly Arg Arg Ser Arg  
 1605 1610 1615  
 Leu Leu Ser Arg Pro Leu Ser Leu Val Lys Asn Leu Val Ser Val Ser  
 1620 1625 1630  
 Ser Leu Ala Asp Lys Asn Ser Glu Lys Ser Asn Asp Met Tyr Glu Lys  
 1635 1640 1645  
 Arg Val Gly Lys Val Met Lys Arg Ile Ala Arg Leu Val Leu Val Lys  
 1650 1655 1660  
 Ala Ala Asp Ser Val Arg Ala Ser Ser Asn Asp Leu Leu Asp Cys Cys  
 1665 1670 1675 1680  
 Ile Leu Asp Val Asn Asp Val Ser Val Lys Ser Leu Asp Glu Phe Arg  
 1685 1690 1695  
 Ala Lys Thr Arg Gln Glu Leu Gln Glu Thr Arg Ile Asp Thr Asn Tyr  
 1700 1705 1710  
 Asn Leu Val Ser Asn Ser Cys Thr Thr Ala Gln Leu Ala Ala Val Glu  
 1715 1720 1725  
 Lys Ser Ser Arg Ile Ile Asn Thr Asn Ile Ser Phe His Asn Ile Pro  
 1730 1735 1740  
 Ala Gly Gln Ala Lys Val Met Asp Ala Asn Glu Glu Ala Phe Ile Asp  
 1745 1750 1755 1760  
 Pro Ser Leu Glu Glu Ile Asn Lys Glu Asp Asn Ser Gly Ala Lys Gln  
 1765 1770 1775  
 Met Thr Gly Lys Gly Gly Ser Asn Arg Gly Arg Ser Lys Lys Ser Gly  
 1780 1785 1790  
 Gly Gly Gly Phe Asn Asn Ala Gly Gly Phe Tyr Asn Asp Asp Ser Ser  
 1795 1800 1805  
 Arg Gly Ser Ser Ser Val Val Asp Glu Asp Ser Arg Ser Arg Thr Gly  
 1810 1815 1820  
 Phe Ser Gln Ile His Met Asp Ala Arg Asn Glu Glu Asp Arg Glu Ser  
 1825 1830 1835 1840  
 Gly Leu Phe Ser Tyr Asp Gly Tyr Val Leu Asn Arg Ile Lys Asn Met  
 1845 1850 1855  
 Ile Thr Gln Asn Gln Ile Asn Asn Asp Ile Val Lys Val Ile Ser Asp  
 1860 1865 1870  
 Ile Glu Asn Phe Phe Lys Ile Cys Val Pro Phe Ser Lys Lys Glu Tyr

1875	1880	1885
Ala Leu Tyr Gly Val Thr Glu Thr Ala Leu Ser Ala Gly Met Asp Ala		
1890	1895	1900
Ile Glu Arg Trp Asn Lys Ala Val Glu Glu Glu Thr Asn Lys Ile Arg		
1905	1910	1915
Lys Glu Cys Arg Asp Leu Thr Asp Thr Gly Ser Val Tyr Asp Met Asn		1920
	1925	1930
Ile Ile Cys Pro Gly Asp Tyr Met Ser Ser Val Gly Glu Gly Gly Asn		1935
	1940	1945
Gly Gly Cys Gly Gly Gly Ser Ser Ser Ser Gly His Leu Leu Ser Asn		1950
	1955	1960
Asn Asn Asn Glu Ala Asn Gln Thr Asn Glu Ile Ser Glu Asp Gln Leu		1965
	1970	1975
Lys His Glu Gly Ser Asp Cys Ser Phe Trp Phe Asn Phe Tyr Lys Lys		1980
1985	1990	1995
Val Val Asn Ser Ser Glu Lys Lys Gln Gly Lys Gly Ser Val Leu Ala		2000
	2005	2010
Asn Thr Gly His Glu Gly Arg Ile Val Gly Arg Pro Leu Arg Thr Phe		2015
	2020	2025
Ile Gln Tyr Lys Gly Lys Gly Phe Ala Glu Thr Lys Val Leu Thr Arg		2030
	2035	2040
Tyr Phe Ser Asn His Asp Ser Tyr Trp Ser Gln Val Met Pro Ile Cys		2045
	2050	2055
Tyr Ile Lys Asn Met Ala Leu Gly Asp Glu Asp Lys Ser Lys Lys Lys		2060
2065	2070	2075
Phe Gly Lys Arg Pro Trp Lys Asn Phe Asn Asn Asn Ser Asn Ser Ser		2080
	2085	2090
Ser Asn Ser Ser Val Lys Tyr Val Ser Ile Gln Asp Leu Glu Lys Lys		2095
	2100	2105
Asp Ser Leu Lys Asn Val Pro Met Gly Tyr Asp Glu Asp Leu Leu Ser		2110
	2115	2120
Leu Tyr Asp Asp Ser Leu Thr Ser Thr Glu Lys Leu Glu Asn Ile		2125
	2130	2135
Lys Ile Val Asn Asp Ser Lys Asp Ala Tyr Val Ile Leu Gly Ser Ser		2140
2145	2150	2155
Asn Gln Ser Ser Phe Asp Gln Thr Phe Ser Gln Gln Tyr Phe Thr His		2160
	2165	2170
Gln Lys Ile Ser Asn Ile Asn Thr Tyr Lys Ser Leu Gly Lys Met Trp		2175
	2180	2185
Asn Cys Asn Asn Gly Met Ser Pro Lys Asn Gln Ile Val Leu Leu Lys		2190
	2195	2200
Lys Leu Leu Phe Lys Asn Leu Asn Ile Leu Trp Ile Lys Leu Tyr Glu		2205
	2210	2215
Arg His Val Leu Cys Asn Trp Gly Cys Ile His Pro Asn Ser Ser Lys		2220
2225	2230	2235
Asn Ser His Phe Glu Met Thr Lys Asn Asn Ala Pro Cys Gly Val Thr		2240
	2245	2250
Asp Ser Asn Pro Pro Leu Ser Val Tyr His Ser Gly Phe Leu Ser Val		2255
	2260	2265
Glu Asp Tyr Gly Gln Leu Leu Lys Asp Thr Phe Pro Leu Met Asn Leu		2270
	2275	2280
His Arg Thr Phe Ser Ala Lys Ser Lys Asp Asn Asn Ser Ser Asp Pro		2285
	2290	2295
Ser Pro Glu Lys Ile Ser Ala Ala Ser Leu Ala Lys Ala Val Tyr Ala		2300
2305	2310	2315
Arg Glu Val Leu Ser Ser Cys Leu Asp Pro Glu Gly Asn Phe Cys Thr		2320
	2325	2330
Ser Trp Ile Thr Asn Ser Cys Ser Val Leu Phe Thr Pro Gly Thr Asn		2335
	2340	2345
Ile Arg Arg Gly Gly Asp Phe Phe Asn Lys Ser Cys Tyr Arg Gln Gln		2350
	2355	2360
		2365

Asp Asn Asp Tyr Cys Phe Ile Gly Lys Glu Glu Thr Lys Lys Cys Pro  
 2370 2375 2380  
 Asn Phe Val Ser Ser Glu Ile Glu Ile Val Ser Ile Leu Lys Thr Ala  
 2385 2390 2395 2400  
 Val Phe Leu Ser Thr Asn Ser Asp Gly His Lys Arg Val Leu Arg Val  
 2405 2410 2415  
 Ile Asn Tyr Asn Lys Asp His Ser Gly Ala Gly Ile Asp Thr Gly Cys  
 2420 2425 2430  
 Ala Asp Asp Glu Asp Asp Asp Asp Asp Gln Gly Gly Thr Asp Lys Thr  
 2435 2440 2445  
 Cys Leu Leu Gln Glu Asp Ser Met Asp Ala Lys Arg Met Leu Ile Ser  
 2450 2455 2460  
 Met Arg Ser Val Ile Asn Gly Lys Ser Leu Asp Glu Ser Ser Leu Ala  
 2465 2470 2475 2480  
 Ile Lys Lys Asp Asn Phe Asn Phe Leu Ala Gly Thr Asp Lys Gly Phe  
 2485 2490 2495  
 Tyr Leu Asp Asn Ser Phe Phe Asn Ser Pro Val Gln Gly Lys Phe Val  
 2500 2505 2510  
 Ala Pro Arg Gly Thr Lys Ile Phe Lys Lys Cys Cys Asp Phe Leu Leu  
 2515 2520 2525  
 Asn Lys Gly Thr Gly Gly Val Phe Ala Arg Ile Phe Phe Thr Asp Trp  
 2530 2535 2540  
 Ala Cys Ile Val Ser Ser Ser Lys Gly Lys Asn Asn Lys Lys Ala Ile  
 2545 2550 2555 2560  
 Glu Ser Thr Leu Gln Ile Arg Asn Gly Gly Cys Phe Ser Leu Thr Pro  
 2565 2570 2575  
 Ser Met Phe Asp Asn Glu Ser Glu Gln Gly Glu Leu Phe His Asp Arg  
 2580 2585 2590  
 Tyr Cys Pro Asp Phe Leu Ser Asp Tyr Asn Lys Gln Asn Ile Phe Ser  
 2595 2600 2605  
 Glu Gln Ala Tyr Lys Cys Ser Phe Leu Ala Asn Pro Val Cys Pro Ala  
 2610 2615 2620  
 Lys Asn Met Leu Lys Arg Ala Lys Asn Ile Arg Leu Cys Ile Thr Asn  
 2625 2630 2635 2640  
 Ala Gly Thr Ala Leu Ile Ser Lys Ile Met Ala Glu Val Glu Lys Met  
 2645 2650 2655  
 Gly Asn Ala Arg Thr Phe Ile Ser Asn Gly Thr Ala Ile Pro Phe Arg  
 2660 2665 2670  
 Leu Ala Glu Asn Thr Ala Cys Ile Ser Val Asp Asn Asn Arg Tyr Phe  
 2675 2680 2685  
 Leu Ile Asp Gly Thr Tyr Leu Leu Gly Gly Arg Leu Glu Gly Ile Asn  
 2690 2695 2700  
 Leu Val Thr Asp Met Tyr Thr Arg Cys Lys Leu Lys Ala Glu Lys His  
 2705 2710 2715 2720  
 Val Ile Leu Asn Ser Leu Phe Ser Thr Glu Phe Ile Ser Ala Ala Ser  
 2725 2730 2735  
 Ser Met Glu Gly Thr Thr Met Gly Arg Gly Leu Cys Leu Ile Glu His  
 2740 2745 2750  
 Val Ser Tyr Met Lys Asn Thr Asp Ser Val Ser Asn Met Asn Lys Asn  
 2755 2760 2765  
 Phe Trp Ser Met Ala Glu Asp Gln Glu Glu Thr Asp Glu Asn Glu Asp  
 2770 2775 2780  
 Asp Asp Asp Glu Asn Glu Glu Asp Glu Asp Glu Asn Glu Glu Asn Thr  
 2785 2790 2795 2800  
 Glu Asn Thr Ser Val Val Lys Tyr Glu Pro Val Ser Lys Thr Ala Phe  
 2805 2810 2815  
 Ser Ser Ser Leu Lys Pro Pro Ser Ile Phe Ile Ala Asp Glu Asp Tyr  
 2820 2825 2830  
 Ile Phe Leu Ser Ile Leu Tyr Glu Leu Ala Lys Ala Thr Ser Asp Cys  
 2835 2840 2845  
 Glu Thr Ala Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser

2850		2855		2860
Ser Lys His Ser Ser Ser Ser Ser Ser Ser Asn Lys Lys Arg Lys Gln				
2865		2870		2875
Lys Asp Asp Val Asn Ser Thr Thr Thr Ala Leu His Ala Leu Arg Lys				2880
	2885		2890	2895
Cys Tyr Ile Ser Cys Val Asp Gln Lys Thr Gly Met Pro Arg Met Asp				
	2900		2905	2910
Val Val Tyr Leu Leu Arg Gly Leu Met Asn Phe Gly Gly Met Cys Thr				
	2915		2920	2925
Ala Ile Ala Ser Gly Asp Gly Glu Lys Ala His His Met Val Gln Thr				
	2930		2935	2940
Leu Cys Ser Val Asn Ile Ala Thr Lys Thr Ala Val Val Phe Val Gly				
	2945		2950	2955
Thr Lys Gly Asn Asn Leu Lys Thr Thr Leu Val Asp Leu Cys Lys Arg				2960
	2965		2970	2975
Thr Trp Phe Glu Arg Phe Thr Asn Ile Asn Val Thr Ala Leu Asn Asn				
	2980		2985	2990
Ala Gly Asp Ser Ser Ser Ser Thr Gln Ala Asn Leu Ala Ser Phe Ala				
	2995		3000	3005
Gly Lys Lys Gly Ile Val Ile Ile Asp Glu Val Gly His Gln Gly Ser				
	3010		3015	3020
Phe Gly Ser Lys Lys Ser Ser Ser Glu Asp Asp Lys Asp Glu Ser Ala				
	3025		3030	3035
Ser Arg Ser Gly Asn Val Asp Phe Gly Gly Ser Gly Gly Glu Met Asn				
	3045		3050	3055
Ser Val Asp Ile Asn Glu Ala Arg Asn Ala Tyr Gly Asp Gly Gly Asn				
	3060		3065	3070
Ser Lys Ile Val Phe Ser Asn Ile Asn Arg Leu Met Thr Glu Ser Lys				
	3075		3080	3085
Leu Lys Val Cys Asp Gln Glu Tyr Asp Phe Ile Ser Glu Leu Lys His				
	3090		3095	3100
Glu Lys Asn Arg Lys Asn Ala Cys Asn Asp Thr Lys Lys Arg Lys Arg				
	3105		3110	3115
Gly Gly Glu Ile Glu Asp Glu Gly Val Glu Cys Glu Glu Ile Glu Arg				
	3125		3130	3135
Asn Asp Gly Lys Asn Asp Glu Asn Gly Val Arg Ile Lys Asp Pro Ile				
	3140		3145	3150
Asn Ile Ser Phe Phe Ala Arg Lys Ala His Trp Trp Asn Cys Ser Ser				
	3155		3160	3165
Gly Val Val Ser Thr Thr Phe Lys Glu Lys Asn Ile Val Tyr Asn Met				
	3170		3175	3180
Leu His Arg Gly Ala Met Pro Phe Ser Ile Lys Asp Cys Thr Asp Ser				
	3185		3190	3195
Pro Trp Leu Asn Glu Thr Asp Ala Val Tyr Arg His Cys Lys Lys Pro				
	3205		3210	3215
Ile Glu Tyr Glu Gly Lys Phe Ser Lys Ser Glu Val Lys Thr Ala Leu				
	3220		3225	3230
Lys Cys Ile Leu Gly Lys Phe Gly Ser Lys Ile Cys Asp Asn Glu Ser				
	3235		3240	3245
Phe Glu Ser Ile Ile Asp Glu Asn Cys Gln Val Asn Asn Leu His Ser				
	3250		3255	3260
Trp Asn Asp Cys Lys Glu Asp Ile Asp Glu Trp Asn Glu Lys Phe Met				
	3265		3270	3275
Ser Lys Asn Lys Lys Asn Lys Gln Asn Met Lys Ile Glu Asp Lys Val				
	3285		3290	3295
Asp Ala Ile Met Asn Ile Ile Gln Lys Asn Asn Gly Leu Leu Lys Trp				
	3300		3305	3310
Asn Thr Ser Phe Asp Arg Asp Gly Ser Pro Val Leu Val Cys Asn Pro				
	3315		3320	3325
Ala Thr Glu Arg Phe Ser Glu Met Ile Thr Ser Ser Leu Ser Ala Gln				
	3330		3335	3340

Asp Met Leu Glu Ile Lys Lys Tyr Leu Gly Asp Asn Cys Leu Ser Thr  
 3345 3350 3355 3360  
 Asn Gly Gly Val Lys Lys Ser Val Ile Asp Gly Asn Thr Ser Ala Pro  
 3365 3370 3375  
 Gly Val Leu Ile Ala Tyr His Cys Val Tyr Thr Gly Lys Ile Ser Asp  
 3380 3385 3390  
 Asp Leu Ser Lys Thr Asn Tyr Pro Val Leu Leu Pro Pro Lys Lys  
 3395 3400 3405  
 Gln His Phe Val Ala Val Asp Asp Ala Ala Glu Lys Ala Leu Leu Gly  
 3410 3415 3420  
 Pro Thr Leu Ser Asn Ile Asn Ile Asp Ser Ile Arg Asn Ile Lys Thr  
 3425 3430 3435 3440  
 Ile Ser Arg Lys Leu Ser Ser Ile Ile Lys Asp Pro Glu Ala Ala Lys  
 3445 3450 3455  
 Leu Leu Val Asp Arg Asp Leu Asp Phe Met Asn Met Tyr Glu Arg Tyr  
 3460 3465 3470  
 Asp Ala Ser Leu Phe Asp Val Val Lys Lys Pro Ser Lys Tyr Ser Phe  
 3475 3480 3485  
 Pro Gly Phe Thr Ser Asp Gly Ser Val Val Leu Ser Thr Ser Thr Ser  
 3490 3495 3500  
 Asp Cys Glu Asn Val Leu Ser Cys Leu Lys Lys Arg Ile Glu Lys Asp  
 3505 3510 3515 3520  
 Lys Met Ser Ala Lys Asn Ser Gly Ser Phe Ile Arg Met Cys Met Asp  
 3525 3530 3535  
 Lys Asn Leu Leu Ser Asp Glu Lys Asp Asp Ser Ser Ser Asn Ser Ser  
 3540 3545 3550  
 Lys Asn Thr Ser Ser Leu Pro Lys Thr Asp Asp Asn Ser Ser Asp Ile  
 3555 3560 3565  
 Ala Asn Phe Leu Ser Val Phe Gly Glu Asn Arg Gln Gln Ser Ser Gln  
 3570 3575 3580  
 Phe Ser Phe Asn Ser Ser Gly Gly Gly Asp Ser Asn Lys Glu Ala Cys  
 3585 3590 3595 3600  
 Phe Asn Val Asp Thr Pro Lys Arg Arg Gln Leu Val Ser Ala Leu Gln  
 3605 3610 3615  
 Lys His Asn Ser Asp Gly Ser Ser Ser Ile Ile Thr Glu Ile Ala Lys  
 3620 3625 3630  
 Ala Ile Pro Gln Lys Asn Asp Val Ser Ser Ser Ile Thr Lys His Met  
 3635 3640 3645  
 Leu Pro Gly Gln Phe Pro Ser Ser Leu Leu Lys Asn Met Thr Ser Pro  
 3650 3655 3660  
 Gln Asn Ser Val Met Ile Arg Gly Ile Phe Gln Gln Gly Ala Lys Ser  
 3665 3670 3675 3680  
 Ser Ile Thr Val Ser Pro Ile Met Met Ser Asn Ser Tyr Ile Phe Ser  
 3685 3690 3695  
 Phe Phe Val Asp Glu Ala Met Ser Lys Arg Leu Ile Val Phe Pro Cys  
 3700 3705 3710  
 Asp Thr Thr Phe Val Phe Glu Asn Lys Asn Glu Asp Val Lys Lys Ile  
 3715 3720 3725  
 Ile Gly Leu Leu Asp Arg Gly Met Lys Tyr Ile His Ser Ser Leu Met  
 3730 3735 3740  
 Met Glu Arg Cys Ile Lys Phe Gly Lys His Gly Ile Lys Gln Arg Gln  
 3745 3750 3755 3760  
 His Glu Phe Asn His His Lys Lys Ala Trp Asn Asp Phe Ser Gly His  
 3765 3770 3775  
 Ser Ser Asp Asn Lys Lys Lys Asp Arg Ile Ser Asp Val Ser Ser Val  
 3780 3785 3790  
 Leu Pro Ser Val Leu Met Lys Asn Leu Ile Arg Asn Lys Val Leu Glu  
 3795 3800 3805  
 Leu Arg Asp Val Lys Ser Val Ser Arg Leu Glu Glu Asn Thr Asn Thr  
 3810 3815 3820  
 Phe Phe His Leu Tyr Thr Ser Met Ser Leu Cys Ala Lys Ala Ala Thr

WO 01/38351

PCT/US00/28888

258

```

3825          3830          3835          3840
Asn Tyr Gly Glu Ser Ser Ser Ser Ser Ala Thr Ile Thr Glu Val Glu
          3845          3850          3855
Glu Asp Asn Ser Cys Asp Ala Glu Glu Gln Gln Leu Arg Arg Lys Lys
          3860          3865          3870
Pro Ala Asn Tyr Glu Ser Met Cys Asn Lys Leu Pro Ser Pro Leu Gln
          3875          3880          3885
Met Cys Gln Ile Asn Pro Lys Ser Leu Asn Thr Met Ala Met Asn Ile
          3890          3895          3900
Ala Arg Ser Arg Gln Gly Ala Trp Ala Gln Leu Asn Ser Met Leu Asn
3905          3910          3915          3920
Ser Val Leu Phe Val Glu Met Pro Phe Val Lys Thr Thr Arg Phe Phe
          3925          3930          3935
Gly Arg Asp Phe Asn Ile Lys Met His Ser Pro Ala Thr Lys Asn Arg
          3940          3945          3950
Pro Ala Ile Asn Phe Asp Asn Cys Ile Gly Met Ser Leu Pro Asn Pro
          3955          3960          3965
Asp Met Asp Val Val Gly Tyr Asp Lys Glu Gly Glu Leu Ile Gly Val
          3970          3975          3980
Gly Ser Ser Leu Thr Lys His Leu Cys Asp Ala Trp Gly Ser Met Asp
3985          3990          3995          4000
Val Arg Asp Leu Met Tyr Ser Cys His His Leu His Met Leu Phe Glu
          4005          4010          4015
Met Ala Leu Gln Tyr Thr Glu Cys Lys Arg Arg Leu Ser Ser Leu Lys
          4020          4025          4030
Thr Leu Lys Ser Asp Lys Thr Gly Val Asp Tyr Val Ala Val Met Leu
          4035          4040          4045
Ala Cys Met Val Tyr Gln Leu Met Val Ser Asn Leu Lys Tyr Pro Val
          4050          4055          4060
Phe Leu Ser Ser Ser Ser His Lys Arg Ala Asn Thr Glu Asp Ile Ala
4065          4070          4075          4080
Asp Glu Asn Gln Val Ser Ser Leu Ser Val Pro Met Phe Leu Ala Met
          4085          4090          4095
Val Val Asn Lys Pro Leu His Ala Leu Arg His Ser Thr Asn Leu Ala
          4100          4105          4110
Leu Pro Asn Ala Ser Gln Lys Ser Asp His Ser Asp Ile Val Lys Tyr
          4115          4120          4125
Ile Val Met Asn Gln Trp Gly Leu Arg Leu Asn Pro Asp Tyr Leu Cys
          4130          4135          4140
Pro Asn Cys Val Lys His Val Leu
4145          4150

```

<210> 168  
<211> 315  
<212> DNA  
<213> SHRIMP

```

<400> 168
atgtacctga gccacattag acaaacacct ttggttgaag aaagacgtgc tctcaccttc 60
aaaatgtacc atcataacaa caataatcag cactcctttg tgaattgcca gtgcaggcga 120
acttcttcct ccatcaactg ttcaagctgt tcccgtagaa ctttcaactc agtaaaggct 180
atccagtact tcaacaaaac tagcagaaat aatactgcac atcatttcaa gatgccggct 240
tcaaaggatc gcaactattc ttctttcgag tatgctgaaa cggcagttgc tgctcacaat 300
atatctcagt ggtga
                                     315

```

<210> 169  
<211> 104  
<212> PRT  
<213> SHRIMP

&lt;400&gt; 169

```

Met Tyr Leu Ser His Ile Arg Gln Thr Pro Leu Val Glu Glu Arg Arg
 1           5           10           15
Ala Leu Thr Phe Lys Met Tyr His His Asn Asn Asn Asn Gln His Ser
      20           25           30
Phe Val Asn Cys Gln Cys Arg Arg Thr Ser Ser Ser Ile Asn Cys Ser
      35           40           45
Ser Cys Ser Arg Glu Thr Phe Asn Ser Val Lys Ala Ile Gln Tyr Phe
      50           55           60
Asn Lys Thr Ser Arg Asn Asn Thr Ala His His Phe Lys Met Pro Ala
      65           70           75           80
Ser Lys Asp Arg Asn Tyr Ser Ser Phe Glu Tyr Ala Glu Thr Ala Val
      85           90           95
Ala Ala His Asn Ile Ser Gln Trp
      100

```

&lt;210&gt; 170

&lt;211&gt; 3696

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 170

```

atgagcaaga gttctagttc tactgtgaaa tctgcatctt tttttaactc tttgatggaa 60
aatgcacctt cctccaagat tgaactttta gaagatggat ggactaagaa agctgctgct 120
gctgatacag atactccaac tgcaaaacct actggtctaa gtatctcgtt gatggatatt 180
agtggttcaa tgggaagtgt gaaatcggct gtggctgata gttgttctgg catcatggct 240
acactcaatg tgattgctcc aggcattcaa aatgctatag ttactacaa tgatttcgac 300
aaacactcca ttgaaagtgg acctgttgtg cgtgcaccag actgttcaga gtgggaaggg 360
ggagattttg tgaagcatat gcgcaagacc gaagtgtgcg gaggcggcgg cggtggcagt 420
gaagctcttc attcttccct gatgtacgtg ttttaacaaca tgattcctgc attcaagaaa 480
atgcatggca ttaccaggga tgaaaaattc cccatcctca tttttgtgtt caccgatgag 540
gatgtgctga ttgccaatag tgacactgga aaattatgtg ccaactcgta cgattcggaa 600
actgcaccag aagaagaatt catcatgaag acttggggac aaaaaccctt gactattctt 660
gacatgagga aggcgctagt ggagaatgat tgttggctac gcatcctcaa tttctctaga 720
tgtagtgcca gtaaccagag tgaattgtgc caagaagatg tgatcaattt ttctggatac 780
gacaacaaca gatggcaact ttttgaatcc tttgacagaa gatcgtgcaa tgtgcgcaag 840
aatatcgcaa cctttattat gaggcaatct atttccctct tcaagaacct gaatgatcaa 900
tttagtgcct tccccatctt gagggaaatc aaccaagaag aattgaatgt ttttattgaa 960
agtgaaggaa gatcagagcc tgcaggattt gaaaagtatg gcgacgctca acgtgaatct 1020
ttcaagtcta gggttttaa tatggcacct ttagattttg gaagagtgtt acagggagga 1080
ggaagatata acaaccacaa gcgtagcgtg ttcttgaatt gtgcatatga tagtgccttt 1140
tgttgctcta agcaaacctt taatccacag cagcaacaac aacaacaaca gtcttctagc 1200
gggtgtgggt ttatcagcaa actggctgta gtgactcaaa gggcccagtc aattacaggg 1260
ggaggaaatg ccgcctctac tctggcactg cecatgaacg cgtgtttcca gtcgttggac 1320
gattttggaa ttgaccatac aaacctctgt gattgttaagg gttgtacaaa attgatggca 1380
agtgttgaag ctacatctga tcaaggaaga aaaaccaagt tgtctcgcaa gtatgctcgc 1440
gtacactggg ccaagatggt tgctgaaaaa ctcttcaaaa tgatgatcaa ggaacaatca 1500
atgatgtacg ttgacagtgc tgtgcctgat gaaattgggg ctatttatgc ctttgttaca 1560
ggcaataatg caggagtgtg ctcgagggtc tctaccatcc tttctgatct gggaaactgaa 1620
tgcggaacaa aggcagaata tgccttctta aaagaaggaa agcacatgaa atctgctagc 1680
tatgatgcac tccaagtgat taacaataca gatctcacac ctgaacaatc ctccatgttt 1740
atgtggttct atgtgcccaa tgatgccttg gaagaagctg gcaaaatctt ccaccagtca 1800
tttagtttct ccaattcata tacaggagga ggattattat cactggacga atacaagagg 1860
ttcgagtttg gacagtgtt tgatttctac aagaaattgg tatcatgtct aaagattact 1920
agaaatgttg aagatgtgct tttggagacg tcaaaaacct ccaacagata ttttgccatc 1980
ccagtctttt gtggatcaga tgaccagaag gaagtgtctc gagaagaatt ggccagcgat 2040
ctatttggag gacgagaaga tgtggcagaa atgatgttta tcgacttgga gactgtgatt 2100
caaaaattgg gaactttgta tgatgtacgt ctgagtctgc cagaaggagg ttatgcagca 2160
atcaaactct tgtgtgcagc cgctcttgg gctgcctcct gtgaagtacc ctccaacact 2220
tcaaacatga tcctctctat tgcaaaaatg gcattcacaa agtattacca agagcagaat 2280

```

```

agcagttccg agactgattt ggatattatt ttgccctcta ttcttgaagg aactgccgat 2340
ggagagatcg agaataatct ttccggtgta gtatttttga ggtgcttaat tacatgggcc 2400
aataagatag gagttgacaa gaactttacc aataaactag aacacttttt ggctctgaga 2460
atcttgacaa aggctggcga ctcaaagatt ggggagaaat atgagacgtt ccctgtacgt 2520
cgacttgacc tatcagagaa ggacttgaaa tatatatgca aaagatgtgg tgtaaaatct 2580
ctaaagatgg aatatgataa tgatgaaaaa ttgtgcttga gatgcaaggg aaactacagg 2640
atgggcaaac caatggtcta tcaactgggac aataaattga ccagagatcc tcgtgccaaa 2700
actgcatcac ccacaaccct caatcttttg aatgccaaaga aaattgatga caaagtaaag 2760
gagatggcta gtgatatcat tggagctctc aatcttcccc caacagataa agacaatgaa 2820
attgctgttt cagctgcagc gaaggctgtg gggattttgt atgggaagac ttgtcttctc 2880
tacaagctat tgaatgaggg caatattgat attccagttg ctgtatgtgt agaatgtgat 2940
tgctgcaaat ccaagtacat gatgtctact cttggtccgg acaagccgca gaacagaaaa 3000
tgtccctggt gcaggtacgc caacaaactc gtcgcaatgg ggagaggagg gaagaaactg 3060
ctgatggatt tgattgaatg tggagcacct tctttggcta tggtggaaga agecatcagg 3120
acatctgggt atgtgatgta tgaagaactg ggagagggtg aagagtttta cattatcgac 3180
tatttcttga aactcaagaa cactgcaatt gccgaaggaa ataaactgca acaaaataat 3240
aataagagac cagcgctctt tcaggctact tctccttctt caccgccaaa gaaaatgagg 3300
agtgatcttc ccgattcctt gttggctgcc attggcgagt gtgcgatcga gacaaaagaa 3360
aagacgacag tcaatctaata tggactcggg gaagtaaagg tagtgaaaaa tgttggacca 3420
aatgacctgg acgggaaaaga ccccttcatt tctctccagg aatactgttc atgggataaa 3480
tttaatagtc tatttgtaaa cccatggttg gggtacaggc tcgatgagca atgggatgat 3540
tggaataact tcttgattca tgtaaagaag aatgatgtat ggaagttctt gtgcaacaaa 3600
acttccccat tttctgttgt tgtaatgaat gatggtagtg gtctgttgaa tgttgataat 3660
gttaatgtac ttgtccgtca aaaaatatgt gtgtga 3696

```

&lt;210&gt; 171

&lt;211&gt; 1227

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 171

```

Met Ser Lys Ser Ser Ser Ser Thr Val Lys Ser Ala Ser Phe Phe Asn
 1          5          10          15
Ser Leu Met Glu Asn Ala Pro Ser Ser Lys Ile Glu Leu Leu Glu Asp
 20          25          30
Gly Trp Thr Lys Lys Ala Ala Ala Asp Thr Asp Thr Pro Thr Ala
 35          40          45
Lys Pro Thr Gly Leu Ser Ile Ser Leu Met Asp Ile Ser Gly Ser Met
 50          55          60
Gly Ser Val Lys Ser Ala Val Ala Asp Ser Cys Ser Gly Ile Met Ala
 65          70          75          80
Thr Leu Asn Val Ile Ala Pro Gly Ile Gln Asn Ala Ile Val Tyr Tyr
 85          90          95
Asn Asp Phe Asp Lys His Ser Ile Glu Ser Gly Pro Val Val Arg Ala
100          105          110
Pro Asp Cys Ser Glu Trp Glu Gly Gly Asp Phe Val Lys His Met Arg
115          120          125
Lys Thr Glu Val Cys Gly Gly Gly Gly Gly Ser Glu Ala Leu His
130          135          140
Ser Ser Leu Met Tyr Val Phe Asn Asn Met Ile Pro Ala Phe Lys Lys
145          150          155          160
Met His Gly Ile Thr Arg Asp Glu Lys Phe Pro Ile Leu Ile Phe Val
165          170          175
Phe Thr Asp Glu Asp Val Arg Ile Ala Asn Ser Asp Thr Gly Lys Leu
180          185          190
Cys Ala Asn Ser Tyr Asp Ser Glu Thr Ala Pro Glu Glu Glu Phe Ile
195          200          205
Met Lys Thr Trp Gly Gln Lys Pro Leu Thr Ile Leu Asp Met Arg Lys
210          215          220
Ala Leu Val Glu Asn Asp Cys Trp Leu Arg Ile Leu Asn Phe Ser Arg
225          230          235          240

```



Cys	Ser	Gly	Ser	Asn	Gln	Ser	Glu	Leu	Cys	Gln	Glu	Asp	Val	Ile	Asn	
				245					250					255		
Phe	Ser	Gly	Tyr	Asp	Asn	Asn	Arg	Trp	Gln	Leu	Phe	Glu	Ser	Phe	Asp	
			260					265					270			
Arg	Arg	Ser	Cys	Asn	Val	Arg	Lys	Asn	Ile	Ala	Thr	Phe	Ile	Met	Arg	
		275					280					285				
Gln	Ser	Ile	Ser	Leu	Phe	Lys	Asn	Leu	Asn	Asp	Gln	Phe	Ser	Ala	Phe	
	290					295					300					
Pro	Ile	Leu	Arg	Glu	Ile	Asn	Gln	Glu	Glu	Leu	Asn	Val	Phe	Ile	Glu	
305					310					315					320	
Ser	Glu	Gly	Arg	Ser	Glu	Pro	Ala	Gly	Phe	Glu	Lys	Tyr	Gly	Asp	Ala	
				325					330					335		
Gln	Arg	Glu	Ser	Phe	Lys	Ser	Arg	Val	Leu	Asn	Met	Ala	Pro	Leu	Asp	
			340					345					350			
Phe	Gly	Arg	Val	Val	Gln	Gly	Gly	Gly	Arg	Tyr	Asn	Asn	His	Lys	Arg	
		355				360						365				
Ser	Val	Phe	Leu	Asn	Cys	Ala	Tyr	Asp	Ser	Ala	Phe	Cys	Cys	Ser	Lys	
	370					375					380					
Gln	Thr	Phe	Asn	Pro	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Gln	Ser	Ser	Ser	
385					390					395					400	
Gly	Gly	Gly	Gly	Ile	Ser	Lys	Leu	Ala	Val	Val	Thr	Gln	Arg	Ala	Gln	
				405					410					415		
Ser	Ile	Thr	Gly	Gly	Gly	Asn	Ala	Ala	Ser	Thr	Leu	Ala	Leu	His	Met	
			420					425					430			
Asn	Ala	Cys	Phe	Gln	Ser	Leu	Asp	Asp	Phe	Gly	Ile	Asp	His	Thr	Asn	
		435					440					445				
Leu	Cys	Asp	Cys	Lys	Gly	Cys	Thr	Lys	Leu	Met	Ala	Ser	Val	Glu	Ala	
	450					455					460					
Thr	Ser	Asp	Gln	Gly	Arg	Lys	Thr	Lys	Leu	Ser	Arg	Lys	Tyr	Ala	Arg	
465					470					475					480	
Val	His	Trp	Ala	Lys	Met	Phe	Ala	Glu	Lys	Leu	Phe	Lys	Met	Met	Ile	
				485					490					495		
Lys	Glu	Gln	Ser	Met	Met	Tyr	Ala	Cys	Ser	Ala	Val	Pro	Asp	Glu	Ile	
			500					505					510			
Gly	Ala	Ile	Tyr	Ala	Phe	Val	Thr	Gly	Asn	Asn	Ala	Gly	Val	Cys	Ser	
		515					520					525				
Arg	Val	Ser	Thr	Ile	Leu	Ser	Asp	Leu	Gly	Thr	Glu	Cys	Gly	Asn	Lys	
	530					535					540					
Ala	Glu	Tyr	Ala	Phe	Leu	Lys	Glu	Gly	Lys	His	Met	Lys	Ser	Ala	Ser	
545					550					555					560	
Tyr	Asp	Ala	Leu	Gln	Val	Ile	Asn	Asn	Thr	Asp	Leu	Thr	Pro	Glu	Gln	
				565					570					575		
Ser	Ser	Met	Phe	Met	Trp	Phe	Tyr	Val	Pro	Asn	Asp	Ala	Leu	Glu	Glu	
			580					585					590			
Ala	Gly	Lys	Ile	Phe	His	Gln	Ser	Phe	Ser	Phe	Ser	Asn	Ser	Tyr	Thr	
		595					600					605				
Gly	Gly	Gly	Leu	Leu	Ser	Leu	Asp	Glu	Tyr	Lys	Arg	Phe	Glu	Phe	Gly	
	610					615					620					
Gln	Cys	Phe	Asp	Phe	Ile	Lys	Lys	Leu	Val	Ser	Cys	Leu	Lys	Ile	Thr	
625					630					635					640	
Arg	Asn	Val	Glu	Asp	Val	Leu	Leu	Glu	Thr	Ser	Lys	Thr	Ser	Asn	Arg	
				645					650					655		
Tyr	Phe	Ala	Ile	Pro	Val	Phe	Cys	Gly	Ser	Asp	Asp	Gln	Lys	Glu	Val	
		660						665					670			
Leu	Arg	Glu	Glu	Leu	Ala	Ser	Asp	Leu	Phe	Gly	Gly	Arg	Glu	Asp	Val	
		675					680					685				
Ala	Glu	Met	Met	Phe	Ile	Asp	Leu	Glu	Thr	Val	Ile	Gln	Lys	Leu	Gly	
	690					695					700					
Thr	Leu	Tyr	Asp	Val	Arg	Leu	Ser	Leu	Pro	Glu	Gly	Gly	Tyr	Ala	Ala	
705					710					715					720	
Ile	Lys	Ser	Val	Cys	Ala	Ala	Ala	Ser	Trp	Ala	Ala	Ser	Cys	Glu	Val	

725								730				735			
Pro	Ser	Asn	Thr	Ser	Asn	Met	Ile	Leu	Ser	Ile	Ala	Lys	Met	Ala	Phe
740				745				750							
Thr	Lys	Tyr	Tyr	Gln	Glu	Gln	Asn	Ser	Ser	Ser	Glu	Thr	Asp	Leu	Asp
755		760		765		770		775		780		785		790	
Ile	Ile	Leu	Pro	Ser	Ile	Gly	Thr	Ala	Asp	Gly	Glu	Ile	Glu	Asn	Asn
770		775		780		785		790		795		800		805	
Leu	Ser	Gly	Val	Val	Phe	Leu	Arg	Cys	Leu	Ile	Thr	Trp	Ala	Asn	Lys
785		790		795		800		805		810		815		820	
Ile	Gly	Val	Asp	Lys	Asn	Phe	Thr	Asn	Lys	Leu	Glu	His	Phe	Leu	Ala
805		810		815		820		825		830		835		840	
Leu	Arg	Ile	Leu	Thr	Lys	Ala	Gly	Asp	Ser	Lys	Ile	Gly	Glu	Lys	Tyr
820		825		830		835		840		845		850		855	
Glu	Thr	Phe	Pro	Val	Arg	Arg	Leu	Asp	Leu	Ser	Glu	Lys	Asp	Leu	Lys
835		840		845		850		855		860		865		870	
Tyr	Ile	Cys	Lys	Arg	Cys	Gly	Val	Lys	Ser	Leu	Lys	Met	Glu	Tyr	Asp
850		855		860		865		870		875		880		885	
Asn	Asp	Glu	Lys	Leu	Cys	Leu	Arg	Cys	Lys	Gly	Asn	Tyr	Arg	Met	Gly
865		870		875		880		885		890		895		900	
Lys	Pro	Met	Val	Tyr	His	Trp	Asp	Asn	Lys	Leu	Thr	Arg	Asp	Pro	Arg
885		890		895		900		905		910		915		920	
Ala	Lys	Thr	Asp	Thr	Thr	Leu	Asn	Leu	Leu	Asn	Ala	Lys	Lys	Ile	Asp
900		905		910		915		920		925		930		935	
Asp	Lys	Val	Lys	Glu	Met	Ala	Ser	Asp	Ile	Ile	Gly	Ala	Leu	Asn	Leu
915		920		925		930		935		940		945		950	
Pro	Pro	Thr	Asp	Lys	Asp	Asn	Glu	Ile	Ala	Val	Ser	Ala	Ala	Ala	Lys
930		935		940		945		950		955		960		965	
Ala	Val	Gly	Ile	Leu	Tyr	Gly	Lys	Thr	Cys	Leu	Leu	Tyr	Lys	Leu	Leu
945		950		955		960		965		970		975		980	
Asn	Glu	Gly	Asn	Ile	Asp	Ile	Pro	Val	Ala	Val	Cys	Val	Glu	Cys	Asp
965		970		975		980		985		990		995		1000	
Cys	Cys	Lys	Ser	Lys	Tyr	Met	Met	Ser	Thr	Leu	Gly	Pro	Asp	Lys	Pro
980		985		990		995		1000		1005		1010		1015	
Gln	Asn	Arg	Lys	Cys	Pro	Trp	Cys	Arg	Tyr	Ala	Asn	Lys	Leu	Val	Ala
995		1000		1005		1010		1015		1020		1025		1030	
Met	Gly	Arg	Gly	Gly	Lys	Lys	Leu	Leu	Met	Asp	Leu	Ile	Glu	Cys	Gly
1010		1015		1020		1025		1030		1035		1040		1045	
Ala	Pro	Ser	Leu	Ala	Met	Val	Glu	Glu	Ala	Ile	Arg	Thr	Ser	Gly	Asp
1025		1030		1035		1040		1045		1050		1055		1060	
Val	Met	Tyr	Glu	Glu	Leu	Gly	Glu	Gly	Glu	Glu	Phe	Tyr	Ile	Ile	Asp
1045		1050		1055		1060		1065		1070		1075		1080	
Tyr	Phe	Leu	Lys	Leu	Lys	Asn	Thr	Ala	Ile	Ala	Glu	Gly	Asn	Lys	Leu
1060		1065													

Val Asn Val Leu Val Arg Gln Lys Ile Cys Val  
1220 1225

<210> 172  
<211> 294  
<212> DNA  
<213> SHRIMP

<400> 172  
atggacattt tggaagacat ctacaagagc gcgatcacgc tcgtactaca atcgcccgaa 60  
tttgtgaatg atgtaaaaca ggaagcttct caggtagttg aggggctaata accttcaatt 120  
agagaagctg tcttttagacg gcttctagaa gaagaaagga aaaaacacga agacgaggtg 180  
ggagatgtgg aagataaaaag acaagcagtg atagacaagg caaatacaat gattacaaca 240  
atggcggcag agtacctgga atctgtagat attttagaag agtttggtt ttaa 294

<210> 173  
<211> 93  
<212> PRT  
<213> SHRIMP

<400> 173  
Met Asp Ile Asp Ile Tyr Lys Ser Ala Ile Thr Leu Val Leu Gln Ser  
1 5 10 15  
Pro Glu Phe Val Asn Asp Val Lys Gln Glu Ala Ser Gln Val Val Glu  
20 25 30  
Gly Leu Ile Pro Ser Ile Arg Glu Ala Val Phe Arg Arg Leu Leu Glu  
35 40 45  
Glu Glu Arg Lys Lys His Glu Asp Glu Val Gly Asp Val Glu Asp Lys  
50 55 60  
Arg Gln Ala Val Ile Asp Lys Ala Asn Thr Met Ile Thr Thr Met Ala  
65 70 75 80  
Ala Glu Tyr Leu Glu Ser Val Asp Ile Glu Phe Gly Phe  
85 90

<210> 174  
<211> 1530  
<212> DNA  
<213> SHRIMP

<400> 174  
atggcgctccg ggtttgctat caagggaatc gttaaaaaact atagaagaat accgtccatt 60  
atcgagtcta tcaaaagtat acggagaagc gaactcgctg aagggtgtata tatcgctctct 120  
ttgcataaaa atactccaaa acatgaggtg gatgaaattg tgaataaaaat acgcctctca 180  
gcaggcaacc cctgcttgga aaaaacgtca ttatttcttc aacatcattc acaaagagg 240  
aatttctata caaggaaagg tgctgaatct gaatctgatt ggctcaaaaag actaccagaa 300  
gatttgagga atatcaacaa tatagtgaag agagaagctt taccatga caagtctttc 360  
actttctccc ctctatatag aattctcact gatagactat tcaatgcagc aattcacaac 420  
tgcaagtaca taattgtaac tgctgattta ttgatgggtt gtgggataac caacaacaaa 480  
gtcgaagaaga aactgttaag tatgggtagt attttagggg gcgaatcaat ggtaccttta 540  
cacgatatac cacatcgatt atcctacaaa ggcctccgca tagaaaatcc tatagtgggt 600  
agttgtcatg accaatgctt agttgttcca gtgagtatgt tagggaagat tttttcaagt 660  
aatatgtacc ccacatttaa aaattttgat caatgcatgg cattattttt gaatgcagtt 720  
gttacacatt cggccgaaaa aatggacggg aagcatgaac gtaataagggt catccatatg 780  
gtaaacgagg tataccttga cgccgcaagg aggaatatcc tagaagaaaa actagaggaa 840  
accaacaaat tggatgctat cgatgaagaa gcaagggaag aatatggaaa cgaaatagga 900  
agaataggag acaaaagtac gtgtctcgtg tttgcattat ctgcacgaga ctttttcttc 960  
acaaacagat tcaatgaaga cacacccta tattctggta cagaaagagg aatcagattc 1020  
atgtgttcaa attattgtac aatgagagat gaggggtggtt tcaggccccc tttgatcatg 1080  
tctgcctacg ggccaacatc ttaccctatc atcttcaata ctttatatga tcaattcaat 1140

```

gtgcaatatt atccatgtgt ttctggagtt gttttatctt ttattggcga tgatcagtta 1200
gcaccagaac cagaatcatt agtggacatt gttgtacgtt ctataaaaaa tccgtctatt 1260
agaatttttt ctggtgatgg tgaacagta taccaggatg gacgtagggt cgatgttggt 1320
ggtgagggaa agaatcagaa gtttaaccga gaagagcgca ccattttaaa tgtattgagg 1380
ataattaaag catataatga agaacgaact aaagaagatg aagatgaaga ggaagaagag 1440
gaggaagaag aggaacaaca aacagcagca acagtgcacg tagaaagtga ttgggatctc 1500
tcactagaga ggggggagaa ttgggtgtag 1530

```

&lt;210&gt; 175

&lt;211&gt; 507

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 175

```

Met Ala Ser Gly Phe Ala Ile Lys Gly Ile Val Lys Asn Tyr Arg Arg
 1          5          10          15
Ile Pro Ser Ile Ile Glu Ser Ile Lys Ser Ile Arg Arg Ser Glu Leu
 20          25          30
Ala Glu Gly Val Tyr Ile Val Ser Leu His Lys Asn Thr Pro Lys His
 35          40          45
Glu Val Asp Glu Ile Val Asn Lys Ile Arg Leu Ser Ala Gly Asn Pro
 50          55          60
Cys Leu Glu Lys Thr Ser Leu Phe Leu Gln His His Ser Gln Met Arg
 65          70          75          80
Asn Phe Tyr Thr Arg Lys Gly Ala Glu Ser Glu Ser Asp Trp Leu Lys
 85          90          95
Arg Leu Pro Glu Asp Leu Arg Asn Ile Asn Asn Ile Val Lys Arg Glu
100          105          110
Ala Leu Pro His Asp Lys Ser Phe Thr Phe Ser Pro Leu Tyr Arg Ile
115          120          125
Leu Thr Asp Arg Leu Phe Asn Ala Ala Ile His Asn Cys Lys Tyr Ile
130          135          140
Ile Val Thr Ala Asp Leu Leu Met Gly Cys Gly Ile Thr Asn Asn Lys
145          150          155          160
Val Glu Lys Lys Leu Leu Ser Met Gly Ser Ile Leu Gly Gly Glu Ser
165          170          175
Met Val Pro Leu His Asp Ile Ala His Arg Leu Ser Tyr Lys Gly Leu
180          185          190
Arg Ile Glu Asn Pro Ile Val Gly Ser Cys His Asp Gln Cys Leu Val
195          200          205
Val Pro Val Ser Met Leu Gly Lys Ile Phe Ser Ser Asn Met Tyr Pro
210          215          220
Thr Phe Lys Asn Phe Asp Gln Cys Met Ala Leu Phe Leu Asn Ala Val
225          230          235          240
Val Thr His Ser Ala Glu Lys Met Asp Gly Lys His Glu Arg Asn Lys
245          250          255
Val Ile His Met Pro Asn Glu Val Tyr Leu Asp Ala Ala Arg Arg Lys
260          265          270
Tyr Leu Glu Glu Lys Leu Glu Glu Thr Asn Lys Leu Asp Ala Ile Asp
275          280          285
Glu Glu Ala Arg Glu Glu Tyr Gly Asn Glu Ile Gly Arg Ile Gly Asp
290          295          300
Lys Ser Thr Cys Leu Val Phe Ala Leu Ser Ala Arg Asp Phe Phe Leu
305          310          315          320
Thr Asn Arg Phe Asn Glu Asp Thr Pro Lys Gly Thr Glu Arg Gly Ile
325          330          335
Arg Phe Met Cys Ser Asn Tyr Cys Thr Met Arg Asp Glu Gly Gly Phe
340          345          350
Arg Pro Arg Leu Ile Met Ser Ala Tyr Gly Pro Thr Ser Tyr Pro Ile
355          360          365
Ile Phe Asn Thr Leu Tyr Asp Gln Phe Asn Val Gln Tyr Tyr Pro Cys

```

WO 01/38351

265

PCT/US00/28888

```

      370              375              380
Val Ser Gly Val Val Leu Ser Phe Ile Gly Asp Asp Gln Leu Ala Pro
385              390              395              400
Glu Pro Glu Ser Leu Val Asp Ile Val Val Arg Ser Ile Lys Asn Pro
      405              410              415
Ser Ile Arg Ile Phe Ser Gly Asp Gly Glu Thr Val Tyr Gln Asp Gly
      420              425              430
Arg Arg Val Asp Val Gly Gly Glu Gly Lys Asn Gln Lys Phe Asn Arg
      435              440              445
Glu Glu Arg Thr Ile Leu Asn Val Leu Arg Ile Ile Lys Ala Tyr Asn
      450              455              460
Glu Glu Arg Thr Lys Glu Asp Glu Asp Glu Glu Glu Glu Glu Glu
465              470              475              480
Glu Glu Glu Gln Gln Thr Ala Ala Thr Val Thr Val Glu Ser Asp Trp
      485              490              495
Asp Leu Ser Leu Glu Arg Gly Glu Asn Trp Val
      500              505

```

<210> 176  
 <211> 246  
 <212> DNA  
 <213> SHRIMP

```

<400> 176
atgacttgct cagaaatctc taaacacatt tctggaacag acagacgttt ctggaacacg 60
gctgaccacg gtggcctcag ctatcctttc aaccctcttt ttacccttca tctccatctc 120
aaaaactttt caaaaatttt ttcagctcac tccagtttag ggggtggacc gctgactagg 180
ccttatgtca agttcgaagg gtggaccgct gggtcgaccc aacgtcagat tacagagagg 240
agctag                                     246

```

<210> 177  
 <211> 77  
 <212> PRT  
 <213> SHRIMP

```

<400> 177
Met Thr Cys Pro Glu Ile Ser Lys His Gly Thr Asp Arg Arg Phe Trp
 1          5          10          15
Asn Thr Ala Asp Pro Gly Gly Leu Ser Tyr Pro Phe Asn Pro Leu Phe
      20          25          30
Thr Leu His Leu His Leu Lys Asn Phe Ser Lys Ile Phe Ser Ala His
      35          40          45
Ser Ser Leu Gly Gly Gly Pro Leu Trp Tyr Val Lys Phe Glu Gly Trp
      50          55          60
Thr Ala Gly Ser Thr Gln Arg Gln Ile Thr Glu Arg Ser
65          70          75

```

<210> 178  
 <211> 738  
 <212> DNA  
 <213> SHRIMP

```

<400> 178
atggtttcca ccaggctctat ggaagcaaaa gctgcagcag cagcaaaagc aaaagaagtt 60
tctccacaga ccagtaagag aaaggcggag gacctcactg aaggaacaga agaagaagaa 120
gaatcagtag aaacacacccc gccgagtaag ctccccagag tcgatgaaga tgaagtctat 180
attgatgaaa atgttgatgg tgatgtgcag atcctcgcct catcaatcga agtcgccaga 240
atggagagag aaagacttgc cgaagccatg gtccgagaca taaaaatcga ggaagaaaaa 300
gccgcaacgg aagcgaggaa agaaatagcc tctcgccataa tttataaaga aatggtatat 360

```

```

cttttgccctc aactggaaaa catgactaac cgcctccgtc cgagatcact tctcaggcac 420
aacgaaatga ccattacaga ccgcacgttc agtgatttgc agatattcaa caaagtcact 480
tttgaattcc ctatactgac tgatattgct ttcccttgccc gtgaaaaatc acgtgtcgag 540
ggttcgagat tctacaacga tatgaagatt ggacctataa cagcctacaa attgaatttg 600
atgtgtaata aattcataga gtctgttggtg caaaagggtga aggcagaaat atccccattt 660
gttgaagtta gtgtatcaag tgaacttgaa gggtcacctt tttgggattt caagcaaaga 720
atagtaaaac acacctag                                     738

```

<210> 179  
 <211> 245  
 <212> PRT  
 <213> SHRIMP

```

<400> 179
Met Val Ser Thr Arg Ser Met Glu Ala Lys Ala Ala Ala Ala Lys
1      5      10      15
Ala Lys Glu Val Ser Pro Thr Thr Ser Lys Arg Lys Ala Glu Asp Leu
20     25     30
Thr Glu Gly Thr Glu Glu Glu Glu Ser Val Glu Thr His Pro Pro
35     40     45
Ser Lys Leu Pro Arg Val Asp Glu Asp Glu Val Tyr Ile Asp Glu Asn
50     55     60
Val Asp Gly Asp Val Gln Ile Leu Ala Ser Ser Ile Glu Val Ala Arg
65     70     75     80
Met Glu Arg Glu Arg Leu Ala Glu Ala Met Val Arg Asp Ile Lys Ile
85     90     95
Glu Glu Glu Lys Ala Ala Thr Glu Ala Arg Lys Glu Ile Ala Ser Arg
100    105    110
Leu Ile Tyr Lys Glu Met Val Tyr Leu Leu Pro Gln Leu Glu Asn Met
115    120    125
Thr Asn Arg Leu Arg Pro Arg Ser Leu Leu Arg His Asn Glu Met Thr
130    135    140
Ile Thr Asp Arg Thr Phe Ser Asp Leu Gln Ile Phe Asn Lys Val Thr
145    150    155    160
Phe Glu Phe Pro Ile Leu Thr Asp Ile Ala Phe Leu Ala Arg Glu Lys
165    170    175
Ser Arg Val Glu Gly Ser Arg Phe Tyr Asn Asp Met Lys Ile Gly Pro
180    185    190
Ile Thr Ala Tyr Lys Leu Asn Leu Met Cys Asn Lys Phe Ile Glu Ser
195    200    205
Val Val Gln Lys Val Lys Ala Glu Ile Ser Pro Phe Val Glu Val Ser
210    215    220
Val Ser Ser Glu Leu Glu Gly Ser Pro Phe Trp Asp Phe Lys Gln Arg
225    230    235    240
Ile Val Lys His Thr
245

```

<210> 180  
 <211> 1221  
 <212> DNA  
 <213> SHRIMP

```

<400> 180
atgtctcaca tcaactctac ctctgctgcc acgacttcat ccaacactct gccgatttgc 60
accactacag cccctatgat tgctgccgcc agagctgctg ccatcgccctc tcggacttct 120
gcttctgctg ttacaagtat caactctaata tctacgtctt cttctgcaat gttccgagta 180
ccacaaggta tctctgttac ggccatgcct cccgtgccag cacttacatc tctgactgaa 240
tctactggaa cgaggatgtc ttctacaccc aatgtggatg ttatacctgt tcctggcccc 300
agaacaagt ccaagtctaa gaagaaggat tcaaagagga agaagaacca gaatggcaac 360
cgtagcagtg acgaggacga accatctctt gttatcgacg acggttcttg aagacagtct 420

```

WO 01/38351

PCT/US00/28888

267

```

aagaacaaga aatattcttg ggtcacatct cttgctacta ctacggctga aagaacaac 480
gacactctcg cccacactag gcccttcctt cccacaccg aagaaggaaa tatgtctgaa 540
attgacgcag ggctaagtaa tccagtcact cgccaaatca ccggagaagt ttatagcgct 600
gcactcactt ctggagttgg agataatgga ctatatcctt cccacttcac ggttgctgac 660
acttcttacg gagattgcga aacaccata cctggacctg cttttgtcct cgacgacggg 720
acagttagca gaggcacatc tcttctgcac agagaagagg cagaattctt gaatgatgga 780
agtaagggtga tccataaccgt taaaccaaga aacagcaagt actccaatat tcaacgtgcc 840
gctagctgta tggcctacgc tgtggacctt ctaaacaacc ataatatcac ctctgaccaa 900
tttgatttta tggctatgac tgcattggga gcccgtaac gttgtggaga aatggccaag 960
ttttttgaga agcgcgataa ggacatcgga gaatatagga ataaggtggt ccaatacaac 1020
agaggcatct ttacacgcac cactgaaatg aataaacgcg caaagattat cctggaacaa 1080
caacaacgcc gtgaagctgc tgccgctgcc gctgccaccg gtgccaccgc cctatccct 1140
acaacttctg ctgccggagt tgggtgctact tcttctgcta ctactaactc tctcgaatat 1200
caagaatca gataccagta a 1221

```

<210> 181  
 <211> 402  
 <212> PRT  
 <213> SHRIMP

<400> 181

Met	Ser	His	Ile	Asn	Ser	Thr	Ser	Ala	Ala	Thr	Thr	Ser	Ser	Asn	Thr
1				5					10					15	
Leu	Pro	Ile	Cys	Thr	Thr	Thr	Ala	Pro	Met	Ile	Ala	Ala	Ala	Arg	Ala
			20					25					30		
Ala	Ala	Ile	Ala	Ser	Arg	Thr	Ser	Ala	Ser	Ala	Val	Thr	Ser	Ile	Asn
		35					40					45			
Ser	Asn	Ser	Thr	Ser	Ser	Ser	Ala	Met	Phe	Arg	Val	Pro	Gln	Gly	Ile
	50					55					60				
Ser	Val	Thr	Ala	Met	Pro	Pro	Val	Pro	Ala	Leu	Thr	Ser	Leu	Thr	Glu
65					70					75					80
Ser	Thr	Gly	Thr	Arg	Met	Ser	Ser	Thr	Pro	Asn	Val	Asp	Val	Ile	Pro
				85					90					95	
Val	Pro	Gly	Pro	Lys	Asn	Lys	Ser	Lys	Ser	Lys	Lys	Lys	Asp	Ser	Lys
			100					105					110		
Arg	Lys	Lys	Asn	Gln	Asn	Gly	Asn	Arg	Ser	Ser	Asp	Glu	Asp	Glu	Pro
		115					120					125			
Ser	Leu	Val	Ile	Asp	Asp	Gly	Ser	Gly	Arg	Gln	Ser	Lys	Asn	Lys	Lys
	130					135					140				
Tyr	Ser	Trp	Val	Thr	Ser	Leu	Ala	Thr	Thr	Thr	Ala	Glu	Arg	Asn	Asn
145					150					155					160
Asp	Thr	Leu	Ala	Pro	Pro	Arg	Pro	Phe	Leu	Pro	Thr	Pro	Glu	Glu	Gly
			165					170						175	
Asn	Met	Ser	Glu	Ile	Asp	Ala	Gly	Leu	Ser	Asn	Pro	Val	Thr	Arg	Gln
		180						185					190		
Ile	Thr	Gly	Glu	Val	Tyr	Ser	Ala	Ala	Leu	Thr	Ser	Gly	Val	Gly	Asp
	195						200					205			
Asn	Gly	Pro	Ser	His	Phe	Thr	Val	Ala	Asp	Thr	Ser	Tyr	Gly	Asp	Cys
	210					215					220				
Glu	Thr	Pro	Ile	Pro	Gly	Pro	Ala	Phe	Val	Leu	Asp	Asp	Gly	Thr	Val
225					230					235					240
Ser	Arg	Gly	Thr	Ser	Leu	Leu	His	Arg	Glu	Glu	Ala	Glu	Phe	Leu	Asn
			245					250						255	
Asp	Gly	Ser	Lys	Val	Ile	His	Thr	Val	Lys	Pro	Arg	Asn	Ser	Lys	Tyr
		260						265					270		
Ser	Asn	Ile	Gln	Arg	Ala	Ala	Ser	Cys	Met	Ala	Tyr	Ala	Val	Asp	Leu
		275					280					285			
Leu	Asn	Asn	His	Asn	Ile	Thr	Ser	Asp	Gln	Phe	Asp	Phe	Met	Ala	Met
	290					295					300				
Thr	Ala	Trp	Ala	Ala	Arg	Gln	Arg	Cys	Gly	Glu	Met	Ala	Lys	Phe	Phe
305					310					315					320

WO 01/38351

PCT/US00/28888

268

Glu Lys Arg Asp Lys Asp Ile Gly Glu Tyr Arg Asn Lys Val Val Gln  
                   325                  330                  335  
 Tyr Asn Arg Gly Ile Phe Thr Arg Thr Thr Glu Met Asn Lys Arg Ala  
                   340                  345                  350  
 Lys Ile Ile Gln Gln Gln Arg Arg Glu Ala Ala Ala Ala Ala Ala  
                   355                  360                  365  
 Thr Gly Ala Thr Ala Pro Ile Pro Thr Thr Ser Ala Ala Gly Val Gly  
                   370                  375                  380  
 Ala Thr Ser Ser Ala Thr Thr Asn Ser Leu Glu Tyr Gln Glu Ile Arg  
                   385                  390                  395                  400  
 Tyr Gln

<210> 182  
 <211> 1617  
 <212> DNA  
 <213> SHRIMP

<400> 182  
 atggaagact ttaaacaatt aaaagtaaaa aatgggtatgt gtttgtctgg ggaaaataacc 60  
 gaaaattatg aacgggtact attaacattc aaatcagtcag agagtgtcag gagaagtggag 120  
 ctaaaggaag gacattttat agttcgtctt agagacaagg aagtactcca catcaagaac 180  
 ggtaacgaaa gattgagaca attaacagga gatcctacgc ttcagattgg actaaaatac 240  
 acatccagtc tcccaaaaaca aggtagtttc ttagaagatg aagaccctaa ttatggaaaa 300  
 aaatggaaac aatcactacc aagcccattc caggaaatga acaaaaattgt ggaagaaaaag 360  
 gctctagtta atgacaagaa ctttaaattt tcacccctat acagaatcat acatgaacgt 420  
 ctttcaaagt cggccgttaa gaaatgtgat tatatgataa tcacaacaga cttcttagta 480  
 ggggtgtgggt tttctcctag aaattgtacc cgtactctta agaatatgga acaagtgtta 540  
 gtgcaacacg gtggtacctc ttctcgtgta tcagtgtatg atatctgtga taggttaacg 600  
 tacaatggct taagtatcgc aaaccccata gttggcagtt tttcaaatat gtgcctaatt 660  
 gtaccaatgg ataaacttgg attacttttc tacaacagca cacaccgctc agctaaaagc 720  
 attggaaatt acatgtcatg ccttttcaat gctgcagttg tatacacgct agaaaagagt 780  
 aatcaaaaat tagataattt cgaaaaggaa atcagatttg caaaaaatga agtcaacctt 840  
 ctagttagcg aaagaagtgt tctggaagaa aaacttaaa aatccaaaaa gctatatgct 900  
 gcctcagaag aacaaaggat ttctcttcga gatgtgcata aaaagtcctc aattgcatca 960  
 tccagatatg acggcgggtg ctgtctgggtc ttgtgccttt ctgaccgaga tttctccttg 1020  
 ttgtgcagaa ccaatggaaa tggttccctt tactctgcca cagaagaagg aatcagatac 1080  
 gtctcttcgg acgactacag aaagagggac gtggatgaac gtaggcccag attgggtcatg 1140  
 tccataactg gctcagatgc acctatatgc atcagagata gtatacgaaa ccattttaat 1200  
 aaccatttca ttgcatccgg aaagggtaat gaaatatcat tcatcgatcc tccgaatgaa 1260  
 aggttgttga tggagatggc cagagaggtt actggatcag acatcaaaat cttcatggat 1320  
 aatggaaaag tatatcaaga tgggtgtaga ataaaagtga ttgaccctc ttctaaagaa 1380  
 ggcaaggaca taataaaaaa ggaagaaaca ttaccagagg aggaaaggaa gcgtctgcgc 1440  
 cgagagcgtc gcatgatttt caacacagtt aaggcaattg agacgtacaa cgagggaacgt 1500  
 ggggaagaag aagaagtagc cacaagcagt ggaggaacaa agagaaagag ggaggagaaa 1560  
 gaaggcgatt atgttgcctt tttgaacaag gcatgcaaa aaattaaagt ttgttga 1617

<210> 183  
 <211> 534  
 <212> PRT  
 <213> SHRIMP

<400> 183  
 Met Glu Asp Phe Lys Gln Leu Lys Val Lys Asn Gly Ile Cys Leu Ser  
   1                  5                  10                  15  
 Gly Glu Asn Thr Glu Asn Tyr Glu Arg Val Leu Leu Thr Phe Lys Ser  
                   20                  25                  30  
 Val Lys Ser Val Arg Arg Ser Glu Leu Lys Glu Gly His Phe Ile Val  
                   35                  40                  45  
 Arg Leu Arg Asp Lys Glu Val Leu His Ile Lys Asn Gly Asn Glu Arg



50	55	60
Leu Arg Gln Leu Thr Gly Asp Pro Thr Leu Gln Ile Gly Leu Lys Tyr		
65	70	75
Thr Ser Ser Leu Pro Lys Gln Gly Ser Phe Leu Glu Asp Glu Asp Pro		80
	85	90
Asn Tyr Gly Lys Lys Trp Asn Glu Ser Leu Pro Ser Pro Phe Gln Glu		95
	100	105
Met Asn Lys Ile Val Glu Glu Lys Ala Leu Val Asn Asp Lys Asn Phe		110
	115	120
Lys Phe Ser Pro Leu Tyr Arg Ile Ile His Glu Arg Leu Ser Asn Ala		125
	130	135
Ala Val Lys Lys Cys Asp Tyr Met Ile Ile Thr Thr Asp Phe Leu Val		140
	145	150
Gly Cys Gly Phe Ser Pro Arg Asn Cys Thr Arg Thr Leu Lys Asn Met		155
	165	170
Glu Gln Val Leu Val Gln His Gly Gly Thr Ser Ser Arg Val Ser Val		175
	180	185
Tyr Asp Ile Cys Asp Arg Leu Thr Tyr Asn Gly Leu Ser Ile Ala Asn		190
	195	200
Pro Ile Val Gly Ser Phe Ser Asn Met Cys Leu Ile Val Pro Met Asp		205
	210	215
Lys Leu Gly Leu Leu Phe Tyr Asn Ser Thr His Pro Ser Ala Lys Ser		220
	225	230
Ile Gly Asn Tyr Met Ser Cys Leu Phe Asn Ala Ala Val Val Tyr Thr		235
	245	250
Leu Glu Lys Ser Asn Gln Lys Leu Asp Asn Phe Glu Lys Glu Ile Arg		255
	260	265
Phe Ala Lys Asn Glu Val Asn Leu Leu Val Ser Ser Val Leu Glu Glu		270
	275	280
Lys Leu Lys Glu Ser Lys Lys Leu Tyr Ala Ala Ser Glu Glu Gln Arg		285
	290	295
Ile Ser Leu Arg Asp Val His Lys Lys Ser Ser Ile Ala Ser Ser Arg		300
	305	310
Tyr Asp Gly Gly Ala Cys Leu Val Phe Ala Phe Ser Asp Arg Asp Phe		315
	325	330
Ser Leu Leu Cys Arg Thr Asn Gly Asn Gly Ser Phe Tyr Ser Ala Thr		335
	340	345
Glu Glu Gly Ile Arg Tyr Val Ser Ser Asp Asp Tyr Arg Lys Arg Asp		350
	355	360
Val Asp Glu Arg Arg Pro Arg Leu Val Met Ser Ile Thr Gly Ser Asp		365
	370	375
Ala Pro Ile Cys Ile Arg Asp Ser Ile Arg Asn His Phe Asn Asn His		380
	385	390
Phe Ile Ala Ser Gly Lys Gly Asn Glu Ile Ser Phe Ile Asp Pro Pro		395
	405	410
Asn Glu Arg Leu Leu Met Glu Met Val Arg Glu Val Thr Gly Ser Asp		415
	420	425
Ile Lys Ile Phe Met Asp Asn Gly Lys Val Tyr Gln Asp Gly Val Glu		430
	435	440
Ile Lys Val Ile Asp Pro Ser Ser Lys Glu Gly Lys Asp Ile Ile Lys		445
	450	455
Lys Glu Glu Thr Leu Pro Glu Glu Glu Arg Lys Arg Leu Arg Arg Glu		460
	465	470
Arg Arg Met Ile Phe Asn Thr Val Lys Ala Ile Glu Thr Tyr Asn Glu		475
	485	490
Glu Arg Gly Glu Glu Glu Glu Val Ala Thr Ser Ser Gly Gly Thr Lys		495
	500	505
Arg Lys Arg Glu Glu Lys Glu Gly Asp Tyr Val Leu Asn Lys Ala Cys		510
	515	520
Lys Glu Ile Lys Val Cys		525
	530	

WO 01/38351

PCT/US00/28888

270

<210> 184  
 <211> 1386  
 <212> DNA  
 <213> SHRIMP

<400> 184  
 atggactcat ctgcatctgt cgtgtttatg agattcgccc ctcccgggga ggaaactgca 60  
 cttccgcccc gacgtgccac gcccggttct gtcgcctacg acctatttcc ctctgaagaa 120  
 atggatatcg aacctatggg actggccaag atctctactg gatatggaat agacaagttt 180  
 cccgacggct gttatggaca aattgtgtca cgttctggga tgacatggaa gaacaacact 240  
 agtgtaccta ctggaacgat tgatgtggat tataggggag aattgaaagt gattctgctc 300  
 aacctatagt cagaaaaaag tgtgccaatc agaaaaggga ccagcattgc ccagttgatt 360  
 ttcttaagat attgtgatgt cgaggaagaa cagattgtgt atattaatga aaccacggga 420  
 gagagaacga ttattgactc tagttctaaa aaggacaaca aaaatcaagc aagaagcgtg 480  
 cgtggaactg gtggatttgg atctacagat aaccctaaatt ttactgaaac caccgtctca 540  
 agaaaccaac aagaagagaa caaaaaggaa gaattggaag aaggggagat cgtagaaatg 600  
 gaaggtttta ttgacattcc ttttcttgaa ggttttcgaaa atatcctcgc agaacaaagc 660  
 aacgaaactg gtgtgacata ccctaatacg aatcaagatg tggaagaaaa agatactaaa 720  
 aatatagatg tcgtcagaga attggaagct gaatttagta gtggaattgg gagtggctcc 780  
 atggactctt ctgactcatc cgattcttct tcttcttctc ctgactcatc cgattcgtct 840  
 gattcatctg actctgaatc atctgatgat tcagaaggag gggataataa ggtccgaaga 900  
 ataagacgtc atcagtatca cggcgccag ttgagttatt cggatgacgt caatggaggg 960  
 ggaagaaatt ctgagaaaat ggagatggac agagtaactc acataaaaac tgaacacata 1020  
 aaaagagagg acgaacccag atacgaagaa agagaaagat atattcatcc aagaagaatg 1080  
 caagtgccca aggactatta ttgtgagcaa tacgaacact acgacgcccc tgctgctgct 1140  
 caccaccacc gccaccacca acaccgccac caaccaccaga ggcactttaa ccaaccccg 1200  
 tccaacaatt cttctgacgt tactgcttac gtcaatgaaa attccccac gaggccatgc 1260  
 cgtgatcgca actctcgatt ctcagaaaga cccaacaatg gcggttataa ccggatcaac 1320  
 tcaaggata caactttcga cccttataga tatggcgcaa gaagagggcg tggaggagta 1380  
 tattag 1386

<210> 185  
 <211> 457  
 <212> PRT  
 <213> SHRIMP

<400> 185  
 Met Asp Ser Ser Ala Ser Val Val Phe Met Arg Phe Ala Pro Pro Gly  
 1 5 10 15  
 Glu Glu Thr Ala Leu Pro Pro Arg Arg Ala Thr Pro Gly Ser Val Ala  
 20 25 30  
 Tyr Asp Leu Phe Pro Ser Glu Glu Met Asp Ile Glu Pro Met Gly Leu  
 35 40 45  
 Ala Lys Ile Ser Thr Gly Tyr Gly Ile Asp Lys Phe Pro Asp Gly Cys  
 50 55 60  
 Tyr Gly Gln Ile Val Ser Arg Ser Gly Met Thr Trp Lys Asn Asn Thr  
 65 70 75 80  
 Ser Val Pro Thr Gly Thr Ile Asp Val Asp Tyr Arg Gly Glu Leu Lys  
 85 90 95  
 Val Ile Leu Arg Asn His Ser Ala Glu Lys Ser Val Pro Ile Arg Lys  
 100 105 110  
 Gly Thr Ser Ile Ala Gln Leu Ile Phe Leu Arg Tyr Cys Asp Val Glu  
 115 120 125  
 Glu Glu Gln Ile Val Tyr Ile Asn Glu Thr Thr Gly Glu Arg Thr Ile  
 130 135 140  
 Ile Asp Ser Ser Ser Lys Lys Asp Asn Lys Asn Gln Ala Arg Ser Val  
 145 150 155 160  
 Arg Gly Thr Gly Gly Phe Gly Ser Thr Asp Asn Pro Asn Phe Thr Glu  
 165 170 175

Thr Thr Val Ser Arg Asn Gln Gln Glu Glu Asn Lys Lys Glu Glu Leu  
 180 185 190  
 Glu Glu Gly Glu Ile Val Glu Met Glu Gly Phe Ile Asp Ile Pro Phe  
 195 200 205  
 Leu Glu Gly Phe Glu Asn Ile Leu Ala Glu Gln Ser Asn Glu Thr Gly  
 210 215 220  
 Val Thr Tyr Pro Asn Thr Asn Gln Asp Val Glu Lys Asp Thr Lys  
 225 230 235 240  
 Asn Ile Asp Val Val Arg Glu Leu Glu Ala Glu Phe Ser Ser Gly Ile  
 245 250 255  
 Gly Ser Gly Ser Met Asp Ser Ser Asp Ser Ser Asp Ser Ser Ser Ser  
 260 265 270  
 Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser Ser Asp Ser Glu Ser Ser  
 275 280 285  
 Asp Asp Ser Glu Gly Gly Asp Asn Lys Val Arg Arg Ile Arg Arg His  
 290 295 300  
 Gln Tyr His Arg Arg Gln Leu Ser Tyr Ser Asp Asp Val Asn Gly Gly  
 305 310 315 320  
 Gly Arg Asn Ser Glu Lys Met Glu Met Asp Arg Val Thr His Ile Lys  
 325 330 335  
 Thr Glu His Ile Lys Arg Glu Asp Glu Pro Arg Tyr Glu Glu Arg Glu  
 340 345 350  
 Arg Tyr Ile His Pro Arg Arg Met Gln Val Pro Lys Asp Tyr Tyr Cys  
 355 360 365  
 Glu Gln Tyr Glu His Tyr Asp Ala Pro Ala Ala His His His Arg  
 370 375 380  
 His His Gln His Arg His Gln His Gln Arg His Phe Asn Gln Pro Arg  
 385 390 395 400  
 Ser Asn Asn Ser Ser Asp Val Thr Ala Tyr Val Asn Glu Asn Ser Pro  
 405 410 415  
 Trp Cys Arg Asp Arg Asn Ser Arg Phe Ser Pro Asn Asn Gly Gly Tyr  
 420 425 430  
 Asn Arg Ile Asn Ser Arg Tyr Thr Thr Phe Asp Pro Tyr Arg Tyr Gly  
 435 440 445  
 Ala Arg Arg Gly Arg Gly Gly Val Tyr  
 450 455

<210> 186  
 <211> 1014  
 <212> DNA  
 <213> SHRIMP

<400> 186  
 atgtcctctt ctcaaggttt gaataataat atgtgcacca cagaaatctt gctgccccaa 60  
 tgcacatcct ctctcttgtc ttttagaggag agtgtggatt atttagaaaa ggattttgaa 120  
 gaacttgga tacctcttgt tgaaggaaag gaagtactac tggaatttgc ctacaaaata 180  
 ttaaacaaaa gggacacaa acgtgtgaatt ggtgacgagc aaggagacgt atgtagcgtc 240  
 ttctttcttc gttttggaaa gaagaagact tttaatccac aaacaaaaat gtggctagt 300  
 aaactggcca atgctatcgc cctatccatg ggtgtgttcc cagaacctgc ctgcacgtgt 360  
 tccagaatga tgacgactgc aaagaagatc cctgttccag aatcatacaa aaatgttaat 420  
 cgcaatatcc aaaaatttga agatgtacat tatatagata tcaattttca gtcctttgta 480  
 agagaacaga taggtttaag tgtattaggt aaaaatgatg tccaaaagaa gaagaaggaa 540  
 gaaacccctt tctttgcacc ctttaataaaa tctaaaatag gaggtgaatg catagaagat 600  
 ttaaagtatg attctgagtc tgtttctatt ataagagatg tgtttaattt attgggtgaa 660  
 atgcctactg aggatgtaaa gacatcaaga agttgtataa acccttccca caatgatagc 720  
 aatcctagta tgaggttagt gtttcgtccc atgtactgga gaaattctaa gctggctatg 780  
 gataaattat ccaaggaaca agactcggct ttgattgaaa agtatatggg aggagaacat 840  
 caacattgta tcattggagg gagaaatgta ttattgtatt gtataactgc actatgtttt 900  
 agctctgatt gtggatttaa aaagatgtta actaatgatg aaataaaaca attgatatgg 960  
 tatttggtag ttttattttt tcatataatc tgtcctatta tacaatccaa atga 1014

WO 01/38351

PCT/US00/28888

272

<210> 187  
 <211> 335  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 187

Met	Ser	Ser	Ser	Gln	Gln	Asn	Asn	Met	Cys	Thr	Thr	Glu	Ile	Leu	Leu
1				5					10					15	
Pro	Lys	Cys	Thr	Ser	Ser	Ser	Leu	Ser	Leu	Glu	Glu	Ser	Val	Asp	Tyr
			20					25					30		
Leu	Glu	Lys	Asp	Phe	Glu	Glu	Leu	Gly	Ile	Pro	Leu	Val	Glu	Gly	Lys
		35					40					45			
Glu	Val	Leu	Leu	Glu	Phe	Ala	Tyr	Lys	Ile	Leu	Asn	Lys	Arg	Asp	Thr
	50					55					60				
Ile	Arg	Val	Ile	Gly	Asp	Glu	Gln	Gly	Asp	Val	Cys	Ser	Val	Phe	Phe
65					70					75					80
Leu	Arg	Phe	Gly	Lys	Lys	Lys	Thr	Phe	Asn	Pro	Gln	Thr	Lys	Met	Trp
				85					90					95	
Leu	Val	Lys	Leu	Ala	Asn	Ala	Ile	Ala	Leu	Ser	Met	Gly	Val	Val	Pro
			100					105					110		
Glu	Pro	Ala	Cys	Thr	Cys	Ser	Arg	Met	Met	Thr	Thr	Ala	Lys	Lys	Ile
		115					120					125			
Pro	Val	Pro	Glu	Ser	Tyr	Lys	Asn	Val	Asn	Arg	Asn	Ile	Gln	Lys	Phe
		130				135					140				
Glu	Asp	Val	His	Tyr	Ile	Asp	Ile	Asn	Phe	Gln	Ser	Phe	Val	Arg	Glu
145					150					155					160
Gln	Ile	Gly	Leu	Ser	Val	Leu	Gly	Lys	Asn	Asp	Val	Gln	Lys	Lys	Lys
				165					170					175	
Lys	Glu	Glu	Thr	Pro	Phe	Phe	Ala	Pro	Phe	Asn	Lys	Ser	Lys	Ile	Gly
			180					185					190		
Gly	Glu	Cys	Ile	Glu	Asp	Leu	Lys	Tyr	Asp	Ser	Glu	Ser	Val	Ser	Ile
		195					200					205			
Ile	Arg	Asp	Val	Phe	Asn	Leu	Leu	Gly	Glu	Met	Pro	Thr	Glu	Asp	Val
	210					215					220				
Lys	Thr	Ser	Arg	Ser	Cys	Ile	Asn	Pro	Ser	His	Asn	Asp	Thr	Asn	Pro
225					230					235					240
Ser	Met	Arg	Leu	Val	Phe	Arg	Pro	Met	Tyr	Trp	Arg	Asn	Ser	Lys	Leu
				245					250					255	
Val	Met	Asp	Lys	Leu	Ser	Lys	Glu	Gln	Asp	Ser	Ala	Leu	Ile	Glu	Lys
			260					265					270		
Tyr	Met	Gly	Gly	Glu	His	Gln	His	Cys	Ile	Ile	Gly	Gly	Arg	Asn	Val
		275					280					285			
Leu	Leu	Tyr	Cys	Ile	Thr	Ala	Leu	Cys	Phe	Ser	Ser	Asp	Cys	Gly	Phe
	290					295					300				
Lys	Lys	Met	Leu	Thr	Asn	Asp	Glu	Ile	Lys	Gln	Leu	Ile	Trp	Tyr	Leu
305					310					315					320
Val	Leu	Leu	Phe	Phe	His	Ile	Ile	Cys	Pro	Ile	Ile	Gln	Ser	Lys	
				325					330					335	

<210> 188  
 <211> 3627  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 188

atgggtgtcc cagaagccaa aaaagtgtac gaaaatgcgt acggtgcaca gaatgggaga 60  
 gtcacatcaagg agaaaactgg atatgaagat tggtacgatg acgaagacga cgaggattat 120  
 tggtcaggag aagaagattg cacaactagc tcacttctca aagccacttc tcttgccaac 180  
 atcaactcca agaacttctt ggatttttga agaggcaaga aatcttcttc ttcttcacct 240

acctgtgact	acacactcga	catggttgat	ttgcccactt	ataatgtatc	agatctggtc	300
atgttgggca	ggcaaatgac	aaccaccatg	ttgaaggggac	agaaaaatat	gggtcagatg	360
atcctgttta	tcaatactac	aaatcaacag	ataatagacg	ttttacatga	cgggtttta	420
gttatcaggg	aagaagatac	tatgcattca	cggatgcaga	acaagaaaca	tatttatgaa	480
aatttttact	gcaggggatga	aaagaagggt	atttctgaat	tcttttctag	aaaaatataa	540
cacgagaaaa	ttaaggctag	aattgaaaga	gtgcctatta	taatcccttc	atcccaagag	600
gaagtgtatt	ggctaactga	acctccaatc	gaagacatga	tgatggctcc	tccagtttct	660
aatcacaaaa	tggacgacta	tgaggggtctc	gattactgga	tcaacaaaca	cacagatggt	720
atgaagaaga	ggaagttttt	gactaacagt	ttcttgttca	ggaacgtgcc	tactacttca	780
ttcaattctt	ccccgacagc	agttttgaaa	tccagattca	aagatgcatt	ttttgctagc	840
cagatggagg	gggtcatctt	gtactacgct	tttaggatga	tccgagtgat	gaaaaatctc	900
ctcaagtcta	aaaaccttaa	agggaggtat	actgtactct	ttacggatgg	aaaggctcca	960
gccatcaaga	tgatgacgag	agccaaacga	cagatcagac	aagaaagaag	taaggaaaaag	1020
gcaaaatcaa	ggaatgaaaa	ttgcctcaat	aggaagacca	acgatctact	attctactcg	1080
tgcgagcgga	tgatgatgag	tcttctctca	gggtctgatg	catctgcatt	actggacata	1140
atgaggatcc	ctgttctaaa	gactacgggg	agcaaatgca	tgtacctttc	taatgcatca	1200
ttcaccgaag	cagaggatga	tatcgtagct	ttaacatcat	gccttttgaa	tctggagact	1260
cctgggaaac	acttctccct	actagaaaag	aggaagatat	tggagtacga	ttcttataat	1320
atgtctggta	acagaaaaga	atccaagagg	tgggaagatt	tattgaatgt	tttgaagcaa	1380
cacaccaacg	atgaaaatca	aacactttct	atgaatcttt	tctccacaga	ttctgatgtg	1440
ctggtgaaat	ggaacctgat	ggttggacat	cataaaaaacg	tgtgtcgtct	tactgtgtca	1500
caatttaagg	actctgaaac	gttcttaaa	attggccatg	tcaagttctt	taggtgcatg	1560
aacagtaatt	cttcgggtga	aaatcaagca	aacgagttgg	gtggttttgc	agctaaaaaga	1620
agaacaaagc	caaatacgat	atataatttg	gcagaatcgc	cgctcatgct	ttcacctgaa	1680
agtacactat	tgattatgct	aactaaagga	tcagactaca	atagtgaat	tgtagtaac	1740
tgtgagtacg	acacatgggt	aaggaaagaa	gttgagatg	ttgaaaacac	gtactgtact	1800
tgtgtgggag	gatgggagat	ttttttgagt	gaacaagaag	ctaggaagaa	taataaagac	1860
tgtgatgata	gtgttggtaa	tatttctatg	gggaatttgt	ctaaaagtaa	ttgtagaaaa	1920
tgtgataaga	aactagtact	tcctttcttg	acaatcaaat	ttttctatct	gtctcaagct	1980
atagattttg	tacgagaccc	gcttcagttg	tgttttcctc	caacacactt	gattgatattg	2040
gaaactgacg	ttagtttgaa	acacgcactt	catagagccc	tggctgtaaa	tgcagcggga	2100
aatgtcatgt	catatttgac	aatgggggtcc	tttaatcaac	gtgttttttg	tacaataaca	2160
accttatcag	atatcagtat	acatctttcc	gggtgctaata	ataatgagag	taaaaataca	2220
gggtcggatg	tagaatctga	tactgaagat	cttatcccat	tttctaataa	taaacgtaaa	2280
agtggtaatg	accctcaaaa	atctacccgt	aagaaaagta	aggttaatgc	aaccagaaaa	2340
agtgacactg	ttactaaaaa	attatcatcg	tcagttttcg	aatcaattcg	tggatttttt	2400
gagagccaca	ctgaagggtg	tataattaat	gataggggaa	tattgactaa	agaaaggatt	2460
gatgtttttg	gtaataattt	agatacgaat	ccagaagcat	tgggagaaga	aatggaggga	2520
ggaggaggaa	tagtatcgtc	aataccaggt	ctatctactg	agcagacgtc	aatcttaaaa	2580
actgaacaaa	ataacagcac	gagtgacttt	ttagattttct	ttaaaaaatt	caatgaaatg	2640
gatgatgtag	aggaggagga	ggaaaaaatg	gaggaagggt	aaaaagagga	agaggaggca	2700
gatctagaaa	ctgacgactg	gttagatgag	gcaaggaaag	cgttcgagta	taaagattct	2760
gacttttttg	aagctgtaac	tgcagccacg	aacgaaatga	cgctatcgct	cgctaaaaat	2820
aatatagaag	aggatgaaca	ttcaagatgt	tctgtatcat	caaaaactta	caataaaca	2880
cccgatgatg	atgaagaaaa	gtgggcagaa	attgttaacg	aattcgacaa	atgcatttct	2940
cttgacaata	taacgtacaa	tgacaatagt	ttattatcac	gtctaagtgg	agtttttaag	3000
gacgccaata	agagagaaga	cggaacaat	agtaacgtgg	tgctctatga	accagttcaa	3060
ggcatcgacg	atgaaagatt	ctctggtgtt	ccttatagtg	taaaaacat	gaacctttta	3120
gttatcgtgt	atatgaacat	gtgcggtcta	gaggataata	ctattgtgta	ccagcaatta	3180
gtccccataa	tacatagtga	attttgtggt	aaaacagaag	aggataaaat	atgcacagat	3240
agaactaatt	ttatgtctgc	tgactagaaa	tacacaatgt	tgaggtatat	gcctgaacta	3300
aaaaagactc	ccagaatcaa	gcaaataaaa	cgcaagaact	gggagaggat	tccaaaagta	3360
ttggacgatt	ttaaagacaa	ggatcgcaga	tgacacagaca	actataataa	acttttgcca	3420
actctcaata	aagagggaaa	aataccgagt	gaaaacacta	aatggctacc	ctctcagggg	3480
catttcattgc	cagtgtctcg	cgtggccata	tctaagccat	ggtcgccctt	cacgctgtgg	3540
tcttcattct	acctccagca	tcagcagcgg	caagacgtat	cactaactaa	cataactcct	3600
cccaattctc	ctcgtcctga	acagtaa				3627

&lt;210&gt; 189

&lt;211&gt; 1204

&lt;212&gt; PRT

WO 01/38351

PCT/US00/28888

274

&lt;213&gt; SHRIMP

&lt;400&gt; 189

Met	Gly	Val	Pro	Glu	Ala	Lys	Lys	Val	Tyr	Glu	Asn	Ala	Tyr	Gly	Ala	1	5	10	15
Gln	Asn	Gly	Arg	Val	Ile	Lys	Glu	Lys	Thr	Gly	Tyr	Glu	Asp	Cys	Tyr	20	25	30	
Asp	Asp	Glu	Asp	Asp	Glu	Asp	Tyr	Cys	Ser	Gly	Glu	Glu	Asp	Cys	Thr	35	40	45	
Thr	Ser	Ser	Leu	Leu	Lys	Ala	Thr	Ser	Leu	Ala	Asn	Ile	Asn	Ser	Lys	50	55	60	
Asn	Phe	Leu	Asp	Phe	Gly	Arg	Gly	Lys	Lys	Ser	Ser	Ser	Ser	Ser	Pro	65	70	75	80
Thr	Cys	Asp	Tyr	Thr	Leu	Asp	Met	Val	Asp	Leu	Pro	Thr	Tyr	Asn	Val	85	90	95	
Ser	Asp	Leu	Val	Met	Leu	Gly	Arg	Gln	Ile	Ala	Thr	Thr	Met	Leu	Lys	100	105	110	
Gly	Gln	Lys	Asn	Met	Gly	Gln	Met	Ile	Leu	Phe	Ile	Asn	Thr	Thr	Asn	115	120	125	
Gln	Gln	Ile	Ile	Asp	Val	Leu	His	Asp	Gly	Phe	Asn	Val	Ile	Arg	Glu	130	135	140	
Glu	Asp	Thr	Met	His	Ser	Arg	Met	Gln	Asn	Lys	Lys	His	Ile	Tyr	Glu	145	150	155	160
Asn	Phe	Tyr	Cys	Arg	Asp	Glu	Lys	Lys	Val	Ile	Ser	Glu	Phe	Phe	Ser	165	170	175	
Arg	Lys	Tyr	Lys	His	Glu	Lys	Ile	Lys	Ala	Arg	Ile	Glu	Arg	Val	Pro	180	185	190	
Ile	Ile	Ile	Pro	Ser	Ser	Gln	Glu	Glu	Val	Asp	Trp	Leu	Thr	Glu	Pro	195	200	205	
Pro	Ile	Glu	Asp	Met	Met	Met	Ala	Pro	Pro	Val	Ser	Asn	His	Lys	Met	210	215	220	
Asp	Asp	Tyr	Glu	Gly	Leu	Asp	Tyr	Trp	Ile	Asn	Lys	His	Thr	Asp	Val	225	230	235	240
Met	Lys	Lys	Arg	Lys	Phe	Leu	Thr	Asn	Ser	Phe	Leu	Phe	Arg	Asn	Val	245	250	255	
Pro	Thr	Thr	Ser	Phe	Asn	Ser	Ser	Pro	Thr	Ala	Val	Leu	Lys	Ser	Arg	260	265	270	
Phe	Lys	Asp	Ala	Phe	Phe	Ala	Ser	Gln	Met	Glu	Gly	Val	Ile	Leu	Tyr	275	280	285	
Tyr	Ala	Phe	Arg	Met	Ile	Arg	Val	Met	Lys	Asn	Leu	Leu	Lys	Ser	Lys	290	295	300	
Asn	Leu	Lys	Gly	Arg	Tyr	Thr	Val	Leu	Phe	Thr	Asp	Gly	Lys	Ala	Pro	305	310	315	320
Ala	Ile	Lys	Met	Met	Thr	Arg	Ala	Lys	Arg	Gln	Ile	Arg	Gln	Glu	Arg	325	330	335	
Ser	Lys	Glu	Lys	Ala	Lys	Ser	Arg	Asn	Glu	Asn	Cys	Leu	Asn	Arg	Lys	340	345	350	
Thr	Asn	Asp	Leu	Leu	Phe	Tyr	Ser	Cys	Glu	Arg	Met	Met	Met	Arg	Leu	355	360	365	
Pro	Gln	Gly	Leu	Met	Ala	Ser	Ala	Leu	Leu	Asp	Ile	Met	Arg	Ile	Pro	370	375	380	
Val	Leu	Lys	Thr	Thr	Gly	Ser	Lys	Cys	Met	Tyr	Leu	Ser	Asn	Ala	Ser	385	390	395	400
Phe	Thr	Glu	Ala	Glu	Asp	Asp	Ile	Val	Arg	Leu	Thr	Ser	Cys	Leu	Leu	405	410	415	
Asn	Leu	Glu	Thr	Pro	Gly	Lys	His	Phe	Ser	Leu	Leu	Glu	Lys	Arg	Lys	420	425	430	
Ile	Tyr	Asp	Ser	Tyr	Asn	Met	Ser	Gly	Asn	Arg	Lys	Glu	Ser	Lys	Arg	435	440	445	
Trp	Glu	Asp	Leu	Leu	Asn	Val	Leu	Lys	Gln	His	Thr	Asn	Asp	Glu	Asn	450	455	460	

Gln	Thr	Leu	Ser	Met	Asn	Leu	Phe	Ser	His	Asp	Ser	Asp	Val	Leu	Val	465	470	475	480
Lys	Trp	Asn	Leu	Met	Val	Gly	His	His	Lys	Asn	Val	Cys	Arg	Leu	Thr	485	490		495
Gly	Thr	Gln	Phe	Lys	Asp	Ser	Glu	Thr	Phe	Leu	Lys	Ile	Gly	His	Val	500	505		510
Lys	Phe	Phe	Arg	Cys	Met	Asn	Ser	Asn	Ser	Ser	Gly	Glu	Asn	Gln	Ala	515	520		525
Asn	Glu	Leu	Gly	Gly	Phe	Ala	Ala	Lys	Arg	Arg	Thr	Lys	Pro	Asn	Thr	530	535		540
Ile	Tyr	Asn	Leu	Ala	Glu	Ser	Pro	Leu	Met	Leu	Ser	Pro	Glu	Ser	Thr	545	550		555
Leu	Leu	Ile	Met	Leu	Thr	Lys	Gly	Ser	Asp	Tyr	Asn	Ser	Ala	Ile	Val	565	570		575
Ser	Asn	Cys	Glu	Tyr	Asp	Thr	Trp	Val	Arg	Lys	Glu	Val	Ala	Val	Phe	580	585		590
Glu	Asn	Thr	Tyr	Cys	Thr	Cys	Val	Gly	Gly	Trp	Glu	Ile	Phe	Leu	Ser	595	600		605
Glu	Gln	Glu	Ala	Arg	Lys	Asn	Asn	Lys	Asp	Cys	Asp	Asp	Ser	Val	Gly	610	615		620
Asn	Ile	Ser	Met	Gly	Asn	Leu	Ser	Lys	Ser	Asn	Cys	Arg	Lys	Cys	Asp	625	630		635
Lys	Lys	Leu	Val	Leu	Pro	Phe	Trp	Thr	Ile	Lys	Phe	Phe	Tyr	Leu	Ser	645	650		655
Gln	Ala	Ile	Asp	Phe	Val	Arg	Asp	Pro	Leu	Gln	Leu	Cys	Phe	Pro	Pro	660	665		670
Thr	His	Leu	Ile	Asp	Leu	Glu	Thr	Asp	Val	Ser	Leu	Lys	His	Ala	Leu	675	680		685
His	Arg	Ala	Val	Asn	Ala	Ala	Ala	Asn	Val	Met	Ser	Tyr	Leu	Thr	Met	690	695		700
Gly	Ser	Phe	Asn	Gln	Arg	Val	Phe	Gly	Thr	Ile	Thr	Thr	Leu	Ser	Asp	705	710		715
Ile	Ser	Ile	His	Leu	Ser	Gly	Ala	Asn	Asn	Asn	Glu	Ser	Lys	Asn	Thr	725	730		735
Gly	Ser	Asp	Val	Glu	Ser	Asp	Thr	Glu	Asp	Leu	Ile	Pro	Phe	Ser	Asn	740	745		750
Asn	Lys	Arg	Lys	Ser	Gly	Asn	Asp	Pro	Gln	Lys	Ser	Thr	Arg	Lys	Lys	755	760		765
Ser	Lys	Val	Asn	Ala	Thr	Arg	Lys	Ser	Ala	Pro	Val	Thr	Lys	Lys	Leu	770	775		780
Ser	Ser	Ser	Val	Phe	Glu	Ser	Ile	Arg	Gly	Phe	Phe	Glu	Ser	His	Thr	785	790		795
Glu	Gly	Gly	Ile	Ile	Asn	Asp	Arg	Gly	Ile	Leu	Thr	Lys	Glu	Arg	Ile	805	810		815
Asp	Val	Phe	Gly	Asn	Asn	Leu	Asp	Thr	Asn	Pro	Glu	Ala	Leu	Gly	Glu	820	825		830
Glu	Asn	Gly	Gly	Gly	Gly	Gly	Ile	Val	Ser	Ser	Ile	Pro	Gly	Leu	Ser	835	840		845
Thr	Glu	Gln	Thr	Ser	Ile	Leu	Lys	Thr	Glu	Gln	Asn	Asn	Ser	Thr	Ser	850	855		860
Asp	Phe	Leu	Asp	Phe	Phe	Lys	Lys	Phe	Asn	Glu	Met	Asp	Asp	Val	Glu	865	870		875
Glu	Glu	Glu	Glu	Lys	Met	Glu	Glu	Gly	Glu	Lys	Glu	Glu	Glu	Glu	Ala	885	890		895
Asp	Leu	Glu	Thr	Asp	Asp	Trp	Leu	Asp	Glu	Ala	Arg	Lys	Ala	Phe	Glu	900	905		910
Tyr	Lys	Asp	Ser	Asp	Phe	Leu	Glu	Ala	Val	Thr	Ala	Ala	Thr	Asn	Glu	915	920		925
Met	Thr	Ser	Ser	Leu	Ala	Lys	Asn	Asn	Ile	Glu	Glu	Asp	Glu	His	Ser	930	935		940
Arg	Cys	Ser	Val	Ser	Ser	Lys	Leu	Asn	Asn	Lys	Gln	Pro	Val	Met	Asp				

WO 01/38351

PCT/US00/28888

276

945                      950                      955                      960  
 Glu Glu Lys Trp Ala Glu Ile Val Asn Glu Phe Asp Lys Cys Ile Ser  
                                  965                      970                      975  
 Leu Asp Asn Ile Thr Tyr Asn Asp Asn Ser Leu Leu Ser Arg Leu Ser  
                                  980                      985                      990  
 Gly Val Leu Met Asp Ala Asn Lys Arg Glu Asp Gly Asn Asn Ser Asn  
                                  995                      1000                      1005  
 Val Val Leu Tyr Glu Pro Val Gln Gly Ile Asp Asp Glu Arg Phe Ser  
                                  1010                      1015                      1020  
 Gly Val Pro Tyr Ser Val Lys Thr Met Asn Leu Leu Val Ile Val Tyr  
 1025                      1030                      1035                      1040  
 Met Asn Met Cys Gly Leu Glu Asp Asn Thr Ile Val Tyr Gln Gln Leu  
                                  1045                      1050                      1055  
 Met Pro Ile Ile His Ser Glu Phe Cys Gly Lys Thr Glu Glu Asp Lys  
                                  1060                      1065                      1070  
 Ile Cys Thr Asp Arg Thr Asn Phe Met Ser Ala Ala Leu Glu Tyr Thr  
                                  1075                      1080                      1085  
 Met Leu Gln Tyr Met Pro Glu Leu Lys Lys Thr Pro Arg Ile Lys Gln  
                                  1090                      1095                      1100  
 Ile Lys Arg Lys Asn Trp Glu Arg Ile Pro Lys Val Leu Asp Asp Phe  
 1105                      1110                      1115                      1120  
 Lys Asp Lys Val Ser Thr Cys Thr Asp Asn Tyr Asn Lys Leu Leu Ala  
                                  1125                      1130                      1135  
 Thr Leu Asn Lys Glu Gly Lys Ile Pro Ser Glu Asn Thr Lys Trp Leu  
                                  1140                      1145                      1150  
 Pro Ser Gln Gly Gln Phe Met Pro Val Leu Gly Val Ala Ile Ser Lys  
                                  1155                      1160                      1165  
 Pro Trp Ser Pro Leu Thr Leu Trp Ser Ser Phe Tyr Leu Gln His Gln  
                                  1170                      1175                      1180  
 Gln Arg Gln Asp Val Ser Leu Thr Asn Ile Thr Pro Pro Asn Ser Pro  
 1185                      1190                      1195                      1200  
 Arg Pro Glu Gln

<210> 190  
 <211> 414  
 <212> DNA  
 <213> SHRIMP

<400> 190  
 atggatggag attcttcctc cttacagtta ttgagtgaat ccgaatttga ttacgtgggc 60  
 gagacactta aggaacaagg tgtgtgggaa ttggccctag aagtgttcaa cgagggtgcc 120  
 aattctattg agactgtgaa agaggaagaa gactacactg ttcttcgatc tagaaactac 180  
 ttccctactg aatctataac actctacaaa caacaacagg aagaggaaga aagtaccctc 240  
 attaagaaga ggaaactcgc ttctggcaag tctccgagaa gtctctgtag agagctgcgt 300  
 ttgctgcaga ttccaagcac tacaaccttt aaagcagctc cacgaagttc ttctaggagg 360  
 ggtaaaaaca ccagactacg cagagtgtgt aaaaattacg gcgcccata gtga 414

<210> 191  
 <211> 137  
 <212> PRT  
 <213> SHRIMP

<400> 191  
 Met Asp Gly Asp Ser Ser Ser Leu Gln Leu Leu Ser Glu Ser Glu Phe  
   1                                  5                                  10                                  15  
 Asp Tyr Val Val Glu Thr Leu Lys Glu Gln Gly Val Trp Glu Leu Ala  
                                   20                                  25                                  30  
 Leu Glu Val Phe Asn Glu Val Ser Asn Ser Ile Glu Thr Val Lys Glu  
                                   35                                  40                                  45



WO 01/38351

PCT/US00/28888

277

Glu Glu Asp Tyr Thr Val Leu Arg Ser Arg Asn Tyr Phe Pro Thr Glu  
 50 55 60  
 Ser Ile Thr Leu Tyr Lys Gln Gln Gln Glu Glu Glu Glu Ser Thr Pro  
 65 70 75 80  
 Ile Lys Lys Arg Lys Leu Ala Ser Gly Lys Ser Pro Arg Ser Leu Cys  
 85 90 95  
 Arg Glu Leu Arg Leu Leu Gln Ile Pro Ser Thr Thr Thr Phe Lys Ala  
 100 105 110  
 Ala Pro Arg Ser Ser Ser Arg Arg Gly Lys Asn Thr Arg Leu Arg Arg  
 115 120 125  
 Val Cys Lys Asn Tyr Gly Ala His Gln  
 130 135

<210> 192  
 <211> 924  
 <212> DNA  
 <213> SHRIMP

<400> 192  
 atgtggtgtt ctacacacct ttcatatagt gagtttttta ctctcttca atctcaaaaa 60  
 cttttcagaa attttttcag ggcactcgag tttagggggg ggaccgctag ctcgaccgaa 120  
 tgtcaagttc cgagggtgga cctctgggtc gggccaatgt cagattacac cagaaattgt 180  
 tggttccaga aacgtacatt aactttttgtg tgttttctgga acaggcggtt ctgggagactg 240  
 gtcgaccag aaatgagagg gtataacctt ctgtttttcac tagagaattt tactcttctt 300  
 ctatctcaaa aactttttcaa aaattttttc agggcactcc agtttagggg gtggaccgct 360  
 agctcgaccg aatgtcaagt tccgagggtg gaccgctggg tcgggccaat gtcagattac 420  
 accagaaatg taatagctcc agaaacgtac attaaacttt gtgtgtttct ggaacaggcg 480  
 tttctggaga ctggctcgacc cagaaatgag aggggtatacc cttctgtttt cactagagaa 540  
 ttttactctt cctccatctc aaaaactttt caaaaatttt ttagggcgct ccagtttagg 600  
 ggggtggaccg cttagctcgac cgaatgtcaa gttccgaggg tggacctctg ggtcgggcca 660  
 atgtcagatt acaccagaaa tgtaatagct ccagaaatag aggaagtatc ttatggccat 720  
 ttctggacca ggtgtttctg gacgaagata ttgcttgatg gcaaccctct cccctctcct 780  
 ccccttttta aaaagggcc acgtgtatat aatgactgta ccacacctca ttcaaaccat 840  
 cacaaccacc accaccacca tggaagaaca tctatccttc aacaaaccct ctccagaaaa 900  
 tggagtagtc ttctttgact ttag 924

<210> 193  
 <211> 305  
 <212> PRT  
 <213> SHRIMP

<400> 193  
 Met Trp Cys Ser Thr His Leu Ser Tyr Ser Glu Phe Phe Thr Pro Leu  
 1 5 10 15  
 Gln Ser Gln Lys Leu Phe Arg Asn Phe Phe Arg Ala Leu Glu Phe Arg  
 20 25 30  
 Gly Trp Thr Ala Ser Ser Thr Glu Cys Gln Val Pro Arg Val Asp Leu  
 35 40 45  
 Trp Val Gly Pro Met Ser Asp Tyr Thr Arg Asn Cys Trp Phe Gln Lys  
 50 55 60  
 Arg Thr Leu Thr Phe Val Cys Phe Trp Asn Arg Arg Phe Trp Arg Leu  
 65 70 75 80  
 Val Asp Pro Glu Met Arg Gly Tyr Asn Leu Phe Ser Leu Glu Asn  
 85 90 95  
 Phe Thr Leu Pro Leu Ser Gln Lys Leu Phe Lys Asn Phe Phe Arg Ala  
 100 105 110  
 Leu Gln Phe Arg Gly Trp Thr Ala Ser Ser Thr Glu Cys Gln Val Pro  
 115 120 125  
 Arg Val Asp Arg Trp Val Gly Pro Met Ser Asp Tyr Thr Arg Asn Val  
 130 135 140

WO 01/38351

PCT/US00/28888

278

Ile Ala Pro Glu Thr Tyr Ile Asn Phe Cys Val Phe Leu Glu Gln Ala  
 145 150 155 160  
 Phe Leu Glu Thr Gly Arg Pro Arg Asn Glu Arg Val Tyr Pro Ser Val  
 165 170 175  
 Phe Thr Arg Glu Phe Tyr Ser Ser Ser Ile Ser Lys Thr Phe Gln Lys  
 180 185 190  
 Phe Phe Arg Ala Leu Gln Phe Arg Gly Trp Thr Ala Ser Ser Thr Glu  
 195 200 205  
 Cys Gln Val Pro Arg Val Asp Leu Trp Val Gly Pro Met Ser Asp Tyr  
 210 215 220  
 Thr Arg Asn Val Ile Ala Pro Glu Ile Glu Glu Val Ser Tyr Gly His  
 225 230 235 240  
 Phe Trp Thr Arg Cys Phe Trp Thr Lys Ile Leu Leu Asp Gly Asn Pro  
 245 250 255  
 Leu Pro Leu Pro Pro Pro Phe Lys Lys Gly Pro Arg Val Tyr Asn Asp  
 260 265 270  
 Cys Thr Thr Pro His Ser Asn His His Asn His His His His His Gly  
 275 280 285  
 Arg Thr Ser Ile Leu Gln Gln Thr Leu Ser Arg Lys Trp Ser Ser Leu  
 290 295 300  
 Leu  
 305

<210> 194  
 <211> 447  
 <212> DNA  
 <213> SHRIMP

<400> 194  
 atgaccacc ttgtccttct tctcctatcc ttatccttgt cccctgtcta ccaccacctc 60  
 accccatata tctcacccca tctcacctat acccccatct caccatcac ctctatatcc 120  
 cccacacctta ttactcgtct ccagtttcaa caccctgttc ttgccgagcc aaccataaac 180  
 cagatctgga cccagctctt cctttttatc cctaaccggc accatttatg ccccaggcg 240  
 ctagcgtgt atataaggcg gcgcggccag gccagaagca tcagttctct gcaagccagc 300  
 agaagagcaa cacaacaagc actctctctc cttctaccta gaagagacct gccaatatc 360  
 aagctacaag aatggcctct ccagcccccg ccgcaccaag tccttacacc atgttgagact 420  
 ctaagtact tagttctgag gaactaa 447

<210> 195  
 <211> 146  
 <212> PRT  
 <213> SHRIMP

<400> 195  
 Met Thr His Leu Val Leu Leu Ile Leu Ser Leu Ser Leu Ser Pro Val  
 1 5 10 15  
 Tyr His His Leu Thr Pro Tyr Leu Ser Pro His Leu Thr Tyr Thr Pro  
 20 25 30  
 Ile Ser Pro Ile Thr Ser Ile Phe Pro His Leu Ile His Ser Leu Gln  
 35 40 45  
 Phe Gln His Pro Val Leu Ala Glu Pro Thr His Asn Gln Ile Trp Thr  
 50 55 60  
 Pro Val Phe Pro Phe Ile Pro Asn Arg His His Leu Cys Pro Gln Ala  
 65 70 75 80  
 Val Tyr Ile Arg Arg Arg Gly Gln Ala Arg Ser Ile Ser Ser Leu Gln  
 85 90 95  
 Ala Ser Arg Arg Ala Thr Gln Gln Ala Leu Ser Leu Leu Leu Pro Arg  
 100 105 110  
 Arg Asp Leu Pro Ile Leu Lys Leu Gln Glu Trp Pro Leu Gln Pro Pro  
 115 120 125

Pro His Gln Val Leu Thr Pro Cys Trp Thr Leu Ser Tyr Leu Val Leu  
 130 135 140  
 Arg Asn  
 145

<210> 196  
 <211> 339  
 <212> DNA  
 <213> SHRIMP

<400> 196  
 atgttggaact ctaagttact tagttctgag gaactaaagg aactaacttc atacgtctcg 60  
 actagctctc gccggtctga tatgaagaaa cacttgctcc atctattcga ggagcacgag 120  
 aagatcttcc aattcatata aggtaagcac aagttctcac tatacacttt ggactttgaa 180  
 attttctatg ttatgctgaa tattttgttg gttgaagtga aaaatattct aagtccaatt 240  
 cctttactct ttgacagaaa tctccaacca gtacggagac tatggatggt tcacaatggc 300  
 cccgcctcac ctgaacgctg cagccgatct cttggataa 339

<210> 197  
 <211> 110  
 <212> PRT  
 <213> SHRIMP

<400> 197  
 Met Leu Asp Ser Lys Leu Leu Ser Ser Glu Glu Leu Lys Glu Leu Thr  
 1 5 10 15  
 Ser Tyr Val Ser Thr Ser Ser Arg Arg Ser Asp Met Lys Lys His Leu  
 20 25 30  
 Leu His Leu Phe Glu Glu His Glu Lys Ile Phe Gln Phe Ile Gln Gly  
 35 40 45  
 Lys His Lys Phe Ser Leu Tyr Thr Leu Asp Phe Glu Ile Phe Tyr Val  
 50 55 60  
 Met Leu Asn Ile Leu Leu Val Glu Val Lys Asn Ile Leu Ser Pro Ile  
 65 70 75 80  
 Pro Leu Leu Phe Asp Arg Asn Leu Gln Pro Val Arg Arg Leu Trp Met  
 85 90 95  
 Phe His Asn Gly Pro Asp Glu Arg Cys Ser Arg Ser Leu Gly  
 100 105 110

<210> 198  
 <211> 3438  
 <212> DNA  
 <213> SHRIMP

<400> 198  
 atggccccgc ctcacctgaa cgctgcagcc gatctcttgg ataaggtgat gtccggacct 60  
 ctatctcccg aaggcgccca aacttcgtcc ccggctgctt gtgttggtgc gaaggttgtg 120  
 aaggcactgg tgagcttttg ccagaagacc cgcttcacca ccaacattgt gatgagagaa 180  
 gttaaagcca tggagtcca aggagacgat tttaactact ctgccttgtg tgcaagtatg 240  
 ccccaacgcc ccgtgactga gaggcagatg ttcgccctta tgaagagtga ggacgaagaa 300  
 atgggagtgt ctgcaaaact ctctccagtc tctgatgacg tcatcaaccc ttcaagcctc 360  
 ccctctggac aagaagtcca ctcatacaact tccgctcaaa tttctggtat gtttcaaaac 420  
 gtgtggagtt tgcttgaaga gtgtggttagt ggctctaata gtaatagttc ccctgtctct 480  
 aggacagtct tagtttgac cctgtttata atccaagtgt tcaagttttt ggtgactaaa 540  
 gtgtctaatt tgaacgtact taaccagtgt tttggacatg ttgttttttg atcacttgat 600  
 gtggctccaa gtaataataa tagtgtccca tcaactgttg ttaacaacaa caacaaaccc 660  
 tcgacctcta ataatagtaa caacatcagt aacaagcgtg ttggtggtag taataacagt 720  
 ggcgccggaa gatcaaagaa agttacagcc acagccaaaa atccctttta taatgtagat 780  
 ggggacaatc atggcatggt tgccggtgcc cctgttgatg ttaatttga tgactttgtt 840

```

tttccccaag ttgaaactct tacaagtaag agcaccatcc ctaaagaaga ggtaaatgta 900
gatgaagatt tgagtaaaat gtgccgtaaa actgccctta cccccctaga aattcatacc 960
tttaatgtgt tcatctctga gattaacccc tccaaatatg accgttcaat gttttgcaag 1020
ggatttttga ctgcatggga taagtttgta gagggggata ctgctggcgt taaacgcttc 1080
cgtaactata tcctcactcg ctcaaactat gcctcagccg ccagggccgt gtatgaagcg 1140
tcaattaagg ggactgttta ttataatgac aagtcaaagt ttctgttcca cgataatggt 1200
aaccctgac tggaacaagag ctggggtaac aagaatggga agaaacctag actcccagct 1260
aacttgatgg cattcatggg tattgacatt gtaaagggtg gcgctaaggg gattcaaaag 1320
tatatgtttg caaagcaatt ccaacatccg gaagtggaa gaaactgtgcc tcctatggct 1380
gtatacgcaa aggttgccgc aggattgaag tcggggactt tgtttgatga ctgggacctg 1440
cctgaatacg aaaattgtca gtttatcaag tatgacacag aagggtgcaa aaagcacagt 1500
gagttatacg ccaaacaact tctccgcaca ggacttaatc aatacaataa actggaagag 1560
ggacagagtg cattcccatt tgcaaatatt gtgacggtaa catccgcctc tagtgatgat 1620
attcacggtg acacaatcat tgaattgatg tacaagacaa aggatggcgt aaagggagtc 1680
tcaaaaattg aggacgaaaa catcatcaag gtgaatccag cagaagaaaa gaagaataat 1740
agagtacaag ccgagaagac cctgtatttt gagattgatt ccgatgatga ggtgtgtgag 1800
agaacagagg aagaattctt caggcctaca tctgttgttg ctgccccgac aacacccctc 1860
gtaccttcta atgtggagga agaggaagag gaagaagagc agatggaaga agaggaggaa 1920
gaggaagtag aaagggaaga aggatctgat aaggaagatg acggagacgc accagcacag 1980
gaagaaatgg aggaggagaa ggaagaagaa caacaacaac agccagaaga agaaagcaat 2040
ggtaatgaga accaagaaga agaacaacaa caacaacaac aaccagaaag agaagaggag 2100
aataaggatg cagatagtga cagcgacagt gatagcagca gcagcagtag tagcagcagt 2160
agcagcagta gtagtagtag cagcagtagt agcagcagca gtagtagcag tgaaaatgaa 2220
gctgaaaaaga agaaagaaga ggaagtacct gccaaagattc agaagagaaa gaggctaagt 2280
gaaaggccat cagaagctgc ttcctctccc aagagaatga gagtagaaga agaacaacaa 2340
caacaactat caccatcatt ggacatactc cagactgcag ttgatgagat gatggaagaa 2400
attcctgcgc ctgagcctat cgttgctaca acctcaccca aggcagcgac acttgcactc 2460
aagacaggat ttagttactc ttcattcgta agaggagatg acctttcagt agctggtaat 2520
acttccccta ctgaaccagc agctgtgccc gctgctgcca cttgcacttc cgatgttgga 2580
aatgactttt tggacatggt ggacgggtta cctggcgata tagtaatgca acctggcgaa 2640
tgcgacgtga ccgcaaaatt ctttgagggc atcacctac cagatggtac tgataatgaa 2700
tgcacaggtt tcgatgatct tcttaaagcc accgagactg ataacattat aaccaccaca 2760
tgctttacct ccccgattca cccttctagc aactcagccc ccagaaaagg tattgataat 2820
tgcagttcta ttaagaggtc tagggcaggt tcactttttg aactgatga tgatagtga 2880
acaaatgagg ttgaaaagga agcccctaaa cgtaagaagc acttgaaaaa gaggcgtaac 2940
aagtcccacc gtggttcctc tggttctgct tcttcttctc attgtatgag tagtgatgaa 3000
gaatcagagg atgaaaggga tatgaaatca acatcaaagg ttcacaagtc accaaaagct 3060
catgttaaac attcccctaa atatgatgct gtaaatagtg atgtaataa ctcatacaac 3120
aatgttaata gtacaacatg catgtcgta tcagatagt atgcagaagc acagcctaaa 3180
agccataata aaagccactc tcgtaaacac tcttcttctc ccacaagtga taagaaacag 3240
aaccaacaat gctcaatcaa tactcaaaat gtcaagaaga ctgttgata gtctccacct 3300
agttttagaa gtttttagtcc taagaaagat gagcttggtg atttctgtc acgcaagcac 3360
acaaagccag ttaggcctca taacaagaag cgtgataatg ttaacaccac taataatgta 3420
gtacagaggt. ctgcctga 3438

```

<210> 199  
 <211> 1141  
 <212> PRT  
 <213> SHRIMP

<400> 199  
 Met Ala Pro Pro His Leu Asn Ala Ala Ala Asp Leu Leu Asp Lys Val  
 1 5 10 15  
 Met Ser Gly Pro Leu Ser Pro Glu Gly Ala Gln Thr Ser Ser Pro Ala  
 20 25 30  
 Ala Cys Val Gly Ala Lys Val Val Lys Ala Leu Val Ser Phe Cys Gln  
 35 40 45  
 Lys Thr Arg Phe Thr Thr Asn Ile Val Met Arg Glu Val Lys Ala Met  
 50 55 60  
 Glu Phe Gln Gly Asp Asp Phe Asn Tyr Ser Ala Leu Cys Ala Ser Met  
 65 70 75 80

WO 01/38351

PCT/US00/28888

281

Pro	Gln	Arg	Pro	Val	Thr	Glu	Arg	Gln	Met	Phe	Ala	Leu	Met	Lys	Ser	
				85					90					95		
Glu	Asp	Glu	Glu	Met	Gly	Val	Ser	Ala	Asn	Phe	Ser	Pro	Val	Ser	Asp	
			100					105					110			
Asp	Val	Ile	Asn	Pro	Ser	Ser	Leu	Pro	Ser	Gly	Gln	Glu	Val	Asp	Ser	
		115					120					125				
Ser	Thr	Ser	Ala	Gln	Ile	Ser	Gly	Met	Phe	Gln	Asn	Val	Trp	Ser	Leu	
	130					135				140						
Leu	Glu	Glu	Cys	Gly	Ser	Gly	Ser	Asn	Ser	Asn	Ser	Ser	Pro	Val	Ser	
145					150					155					160	
Arg	Thr	Val	Leu	Val	Cys	Thr	Leu	Phe	Ile	Ile	Gln	Val	Phe	Lys	Phe	
				165				170						175		
Leu	Val	Thr	Lys	Val	Ser	Asn	Val	Asn	Val	Leu	Asn	Gln	Leu	Phe	Gly	
			180					185					190			
His	Val	Val	Phe	Gly	Ser	Leu	Asp	Val	Ala	Pro	Ser	Asn	Asn	Asn	Ser	
		195					200					205				
Val	Pro	Ser	Thr	Val	Val	Asn	Asn	Asn	Asn	Lys	Pro	Ser	Thr	Ser	Asn	
	210					215					220					
Asn	Ser	Asn	Asn	Ile	Ser	Asn	Lys	Arg	Val	Gly	Gly	Ser	Asn	Asn	Ser	
225					230					235					240	
Gly	Gly	Gly	Arg	Ser	Lys	Lys	Val	Thr	Ala	Thr	Ala	Lys	Asn	Pro	Phe	
			245					250						255		
Asn	Asn	Val	Asp	Gly	Asp	Asn	His	Gly	Met	Phe	Ala	Gly	Ala	Pro	Val	
			260					265					270			
Asp	Val	Asn	Leu	Asp	Asp	Phe	Val	Phe	Pro	Gln	Val	Glu	Thr	Leu	Thr	
		275					280					285				
Ser	Lys	Ser	Thr	Ile	Pro	Lys	Glu	Glu	Val	Asn	Val	Asp	Glu	Asp	Leu	
	290					295				300						
Ser	Lys	Met	Cys	Arg	Lys	Thr	Ala	Leu	Thr	Pro	Leu	Glu	Ile	His	Thr	
305					310					315					320	
Phe	Asn	Val	Phe	Ile	Ser	Glu	Ile	Asn	Pro	Ser	Lys	Tyr	Asp	Arg	Ser	
			325					330						335		
Met	Phe	Cys	Lys	Gly	Phe	Leu	Thr	Ala	Trp	Asp	Lys	Phe	Val	Glu	Gly	
			340					345					350			
Asp	Thr	Ala	Gly	Val	Lys	Arg	Phe	Arg	Asn	Tyr	Ile	Leu	Thr	Arg	Ser	
		355					360					365				
Asn	Tyr	Ala	Ser	Ala	Ala	Arg	Ala	Val	Tyr	Glu	Ala	Ser	Ile	Lys	Gly	
	370					375					380					
Thr	Val	Tyr	Tyr	Asn	Asp	Lys	Ser	Lys	Phe	Leu	Phe	His	Asp	Asn	Val	
385					390					395					400	
Asn	Pro	Asp	Leu	Asp	Lys	Ser	Trp	Gly	Asn	Lys	Asn	Gly	Lys	Lys	Pro	
				405				410						415		
Arg	Leu	Pro	Ala	Asn	Leu	Met	Ala	Phe	Met	Gly	Ile	Asp	Ile	Val	Lys	
			420					425					430			
Val	Cys	Ala	Lys	Gly	Ile	Gln	Lys	Tyr	Met	Phe	Ala	Lys	Gln	Phe	Gln	
		435					440					445				
His	Pro	Glu	Val	Glu	Glu	Leu	Val	Pro	Pro	Met	Ala	Val	Tyr	Ala	Lys	
	450					455					460					
Val	Ala	Ala	Gly	Leu	Lys	Ser	Gly	Thr	Leu	Phe	Asp	Asp	Trp	Asp	Leu	
465					470					475					480	
Pro	Glu	Tyr	Glu	Asn	Cys	Gln	Phe	Ile	Lys	Tyr	Asp	Thr	Glu	Gly	Cys	
				485					490					495		
Lys	Lys	His	Ser	Glu	Leu	Tyr	Ala	Lys	Gln	Leu	Leu	Arg	Thr	Gln	Gln	
			500					505					510			
Tyr	Asn	Lys	Leu	Glu	Glu	Gly	Gln	Ser	Ala	Phe	Pro	Phe	Ala	Asn	Ile	
		515					520					525				
Val	Thr	Val	Thr	Ser	Ala	Ser	Ser	Asp	Asp	Ile	His	Gly	Asp	Thr	Ile	
		530				535					540					
Ile	Glu	Leu	Met	Tyr	Lys	Thr	Lys	Asp	Gly	Val	Lys	Gly	Val	Ser	Lys	
545					550					555					560	
Ile	Glu	Asp	Glu	Asn	Ile	Ile	Lys	Val	Asn	Pro	Ala	Glu	Glu	Lys	Lys	

				565					570					575		
Asn	Asn	Arg	Val	Gln	Ala	Glu	Lys	Thr	Leu	Tyr	Phe	Glu	Ile	Asp	Ser	
			580					585					590			
Asp	Asp	Glu	Val	Cys	Glu	Arg	Thr	Glu	Glu	Glu	Phe	Phe	Arg	Pro	Thr	
		595					600				605					
Ser	Val	Val	Ala	Ala	Pro	Thr	Thr	Pro	Leu	Val	Pro	Ser	Asn	Val	Glu	
	610					615					620					
Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Met	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu
625				630					635							640
Val	Glu	Arg	Glu	Glu	Gly	Ser	Asp	Lys	Glu	Asp	Asp	Gly	Asp	Ala	Pro	
			645						650					655		
Ala	Gln	Glu	Glu	Met	Glu	Glu	Glu	Lys	Glu	Glu	Glu	Gln	Gln	Gln	Gln	
			660					665					670			
Pro	Glu	Glu	Glu	Ser	Asn	Gly	Asn	Glu	Asn	Gln	Glu	Glu	Glu	Gln	Gln	
		675					680				685					
Gln	Gln	Gln	Gln	Pro	Glu	Arg	Glu	Glu	Glu	Asn	Lys	Asp	Ala	Asp	Ser	
		690				695					700					
Asp	Ser	Asp	Ser	Asp	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
705				710						715						720
Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Glu
			725						730							735
Asn	Glu	Ala	Glu	Lys	Lys	Lys	Glu	Glu	Glu	Val	Pro	Ala	Lys	Ile	Gln	
			740				745						750			
Lys	Arg	Lys	Arg	Leu	Ser	Pro	Ser	Glu	Ala	Ala	Ser	Ser	Pro	Lys	Arg	
		755					760				765					
Met	Arg	Val	Glu	Glu	Glu	Gln	Gln	Gln	Gln	Leu	Ser	Pro	Ser	Leu	Asp	
	770					775					780					
Ile	Leu	Gln	Thr	Ala	Val	Asp	Glu	Met	Met	Glu	Glu	Ile	Pro	Ala	Pro	
785				790						795						800
Glu	Pro	Ile	Val	Ala	Thr	Thr	Ser	Pro	Lys	Ala	Ala	Thr	Leu	Ala	Leu	
			805						810					815		
Lys	Thr	Gly	Phe	Ser	Tyr	Ser	Ser	Phe	Val	Arg	Gly	Asp	Asp	Leu	Ser	
			820					825				830				
Val	Ala	Gly	Asn	Thr	Ser	Pro	Thr	Glu	Pro	Ala	Ala	Val	Pro	Ala	Ala	
		835					840					845				
Ala	Thr	Cys	Thr	Ser	Asp	Val	Gly	Asn	Asp	Phe	Leu	Asp	Met	Leu	Asp	
	850					855					860					
Gly	Leu	Pro	Gly	Asp	Ile	Val	Met	Gln	Pro	Gly	Glu	Cys	Asp	Val	Thr	
865				870						875						880
Ala	Lys	Phe	Phe	Glu	Gly	Ile	Thr	Leu	Pro	Asp	Gly	Thr	Asp	Asn	Glu	
			885						890					895		
Cys	Thr	Gly	Phe	Asp	Asp	Leu	Leu	Lys	Ala	Thr	Glu	Thr	Asp	Asn	Ile	
			900					905								

WO 01/38351

283

PCT/US00/28888

Ser His Asn Lys Ser His Ser Arg Lys His Ser Ser Ser Ser Thr Ser  
 1060 1065 1070  
 Asp Lys Lys Gln Asn Gln Gln Cys Ser Ile Asn Thr Gln Asn Val Lys  
 1075 1080 1085  
 Lys Thr Val Val Gln Ser Pro Pro Ser Phe Arg Ser Phe Ser Pro Lys  
 1090 1095 1100  
 Lys Asp Glu Leu Gly Asp Phe Leu Ser Arg Lys His Thr Lys Pro Val  
 1105 1110 1115 1120  
 Arg Pro Tyr Asn Lys Lys Arg Asp Asn Val Asn Thr Thr Asn Asn Val  
 1125 1130 1135  
 Val Gln Arg Ser Ala  
 1140

<210> 200  
 <211> 1875  
 <212> DNA  
 <213> SHRIMP

<400> 200  
 atgtcctcga cgacctctcc atcgtctttg tgggatgatg acgatgatga tgacgaagaa 60  
 gacgaaaaag atgtcaagca agaagtctcg aaccgtcccc ccattttttc gtacatggaa 120  
 actgtatctt ttagtgataa cgatgaggac gataacaagg gagaagaaga atgttttgga 180  
 tcaaaactttg atatgttttg tgattcagat aacatgccat caacttctac tgcccccttc 240  
 cctcctccct ctacaacaac accacttcct actcctcgat ccacatgga tactgattcg 300  
 gatgaatgtg acgaagaagg agcagcagca gcatacagcac cgtctattgc cgctcttct 360  
 tctatccctg tcgggatctc tgaagctgaa ttgaaaaaaa tggaaaagaa aaagaggaag 420  
 gaaattaaga aactcaaaaa gatgatgaaa gatcctctcc ctcacctata tgtaggagga 480  
 gaacctcctg tcgcagcaga ttataaaaca agggcaaaca tttcccttta taaagttgac 540  
 cctagtatcg atatgtgcgg tgctgccccct cctcaatttt gcgctgaatt gccaccccca 600  
 tccatagatg tgtatacttc ttcctatgta tttcctcctc ccacacctgc catgcataat 660  
 aagaaagggt ccaagaaatg tcaattcctt aaggggagaa aggccttgag gaaatggatt 720  
 cagcagaatg tatgcatggc cctcccggt aaaaggggag gtgtattttt ggctcacttg 780  
 gaacaaagat tcttggtgta acatggagat gaatacaagg tcccaaggat gtttgtttca 840  
 agagtattga acaaagcttt ccccaatctg attgctcgtg cagacacact gtgcagtgat 900  
 atgacattct atactaacct ttgttgata gttaatggag ttgtcgtatg ctttgataaa 960  
 gatgatggag gaatacatgg cgatgcgtca gagtatgcaa caggagaaaa ttttgatact 1020  
 gtagtgttcc acaagaggga agaacaaaag accaatggga gtgccagtaa gaagaggcgt 1080  
 ctcacgcctg aactagtaa tatgggaaca agcactgatg tgcaagaatt ccaaacgatg 1140  
 ggaacaaata ctgatatgca agaattccaa tcaatgggaa caaataccaa ccccatagag 1200  
 acttcatcag tgggtgtgaa taccaaccca cttcccaacc ctcccccaag attggtaatt 1260  
 actcctttaa cgaatgatgt accagaattg gacatgatgt ggctttattc gccttccaga 1320  
 ggaggtggaa attctagaat gagtgcacaa acaggaacat ctccccgtc taacacccca 1380  
 attcctacct gcttcacagg aggtgcgaat gtagtagtgc ctaatggatt tgcctctccc 1440  
 acgttccctt tagaatgtga cgaagatgat ccaagtattc ccaattctta caattacgaa 1500  
 gaggataaag tctttcatcc attttatgag tatatggcca aatatctatc ccctcttggt 1560  
 ccatcatata acaagggaca gacttgtaat gttgtccagg agtggttcaa gggatccttc 1620  
 tctcttgcaa agcgtagagg aacagtcccc aaattctgta gtaacatttc ccacgctttc 1680  
 ttttgtaata tggatgtatg tactgccatg tgcaaattggg cgaagactgt aattagacat 1740  
 ggacaatatt gtaatagatg tatcgtaagg aggtcatgta catccatgct cgcatacac 1800  
 tacattgttt gcagagacgc ttcattgtgat gttcccaagt gcagggaaaag ggctcgcaac 1860  
 gacatggatg actga 1875

<210> 201  
 <211> 620  
 <212> PRT  
 <213> SHRIMP

<400> 201  
 Met Ser Ser Thr Thr Ser Pro Ser Ser Leu Trp Asp Asp Asp Asp Asp  
 1 5 10 15

Asp	Asp	Glu	Glu	Asp	Glu	Lys	Asp	Val	Lys	Gln	Glu	Val	Ser	Asn	Arg
		20						25					30		
Pro	Pro	Ile	Phe	Ser	Tyr	Met	Val	Ser	Phe	Ser	Asp	Asn	Asp	Glu	Asp
		35					40					45			
Asp	Asn	Lys	Gly	Glu	Glu	Glu	Cys	Phe	Gly	Ser	Asn	Phe	Asp	Met	Phe
	50					55					60				
Gly	Asp	Ser	Asp	Asn	Met	Pro	Ser	Thr	Ser	Thr	Ala	Pro	Phe	Pro	Pro
65					70					75					80
Pro	Ser	Thr	Thr	Thr	Pro	Leu	Pro	Thr	Pro	Arg	Ser	Ile	Met	Asp	Thr
				85				90						95	
Asp	Ser	Asp	Glu	Cys	Asp	Glu	Glu	Gly	Ala	Ala	Ala	Ala	Ser	Ala	Pro
			100					105					110		
Ser	Ile	Ala	Ala	Ser	Ser	Ser	Ile	Pro	Val	Gly	Ile	Ser	Glu	Ala	Glu
		115					120					125			
Leu	Lys	Lys	Met	Glu	Lys	Lys	Lys	Arg	Lys	Glu	Ile	Lys	Lys	Leu	Lys
	130					135					140				
Lys	Met	Met	Lys	Asp	Pro	Leu	Pro	His	Leu	Tyr	Val	Gly	Gly	Glu	Pro
145					150					155					160
Pro	Val	Ala	Ala	Asp	Tyr	Lys	Thr	Arg	Ala	Asn	Ile	Ser	Leu	Tyr	Lys
				165				170						175	
Val	Asp	Pro	Ser	Ile	Asp	Met	Cys	Gly	Val	Ala	Pro	Pro	Gln	Phe	Cys
			180					185					190		
Ala	Glu	Leu	Pro	Thr	Pro	Ser	Ile	Asp	Val	Tyr	Thr	Ser	Ser	Tyr	Val
		195					200					205			
Phe	Pro	Pro	Pro	Thr	Pro	Ala	Met	His	Asn	Lys	Lys	Gly	Ser	Lys	Lys
	210					215					220				
Cys	Gln	Phe	Leu	Lys	Gly	Arg	Lys	Ala	Leu	Arg	Lys	Trp	Ile	His	Glu
225					230					235					240
Asn	Val	Cys	Met	Ala	Pro	Pro	Gly	Lys	Arg	Gly	Gly	Val	Phe	Leu	Ala
				245					250					255	
His	Leu	Glu	Gln	Arg	Phe	Leu	Ala	Glu	His	Gly	Asp	Glu	Tyr	Lys	Val
			260					265					270		
Pro	Arg	Met	Phe	Val	Ser	Arg	Val	Leu	Asn	Lys	Ala	Phe	Pro	Asn	Leu
		275					280					285			
Ile	Ala	Arg	Ala	Asp	Thr	Leu	Cys	Ser	Asp	Met	Thr	Phe	Tyr	Thr	Asn
	290					295					300				
Leu	Cys	Trp	Ile	Val	Asn	Gly	Val	Val	Val	Cys	Phe	Asp	Lys	Asp	Asp
305					310					315					320
Gly	Gly	Ile	His	Gly	Asp	Ala	Ser	Glu	Tyr	Ala	Thr	Gly	Glu	Asn	Phe
			325						330					335	
Asp	Thr	Val	Val	Phe	His	Lys	Arg	Glu	Glu	Gln	Lys	Thr	Asn	Gly	Ser
			340					345					350		
Ala	Ser	Lys	Lys	Arg	Arg	Leu	Thr	Pro	Asp	Thr	Ser	Asn	Met	Gly	Thr
		355					360					365			
Ser	Thr	Asp	Val	Gln	Glu	Phe	Gln	Thr	Met	Gly	Thr	Asn	Thr	Asp	Met
		370				375					380				
Gln	Glu	Phe	Gln	Ser	Met	Gly	Thr	Asn	Thr	Asn	Pro	Ile	Glu	Thr	Ser
385					390					395					400
Ser	Val	Gly	Val	Asn	Thr	Asn	Pro	Leu	Pro	Asn	Pro	Pro	Pro	Arg	Leu
				405					410					415	
Val	Ile	Thr	Pro	Leu	Thr	Asn	Asp	Val	Pro	Glu	Leu	Asp	Met	Met	Trp
			420					425					430		
Lys	Pro	Ser	Arg	Gly	Gly	Gly	Asn	Ser	Arg	Met	Ser	Ala	Asn	Thr	Gly
	435						440					445			
Thr	Ser	Pro	Leu	Ser	Asn	Thr	Pro	Ile	Pro	Thr	Cys	Phe	Thr	Gly	Gly
	450					455					460				
Ala	Asn	Val	Val	Val	Pro	Asn	Gly	Phe	Val	Pro	Pro	Thr	Phe	Pro	Leu
465					470					475					480
Glu	Cys	Asp	Glu	Asp	Asp	Pro	Ser	Ile	Pro	Asn	Ser	Tyr	Asn	Tyr	Glu
				485					490					495	
Glu	Asp	Lys	Val	Phe	His	Pro	Phe	Tyr	Glu	Tyr	Met	Ala	Lys	Tyr	Leu



**WO 01/38351**

**PCT/US00/28888**

285

			500					505					510		
Ser	Pro	Leu	Val	Pro	Ser	Tyr	Asn	Lys	Gly	Gln	Thr	Cys	Asn	Val	Val
		515					520					525			
Gln	Glu	Trp	Phe	Lys	Gly	Ser	Phe	Ser	Leu	Ala	Lys	Arg	Arg	Gly	Thr
	530					535					540				
Val	Pro	Lys	Phe	Cys	Ser	Asn	Ile	Ser	His	Ala	Phe	Phe	Cys	Asn	Met
545					550					555					560
Asp	Val	Cys	Thr	Ala	Met	Cys	Lys	Trp	Ala	Lys	Thr	Val	Ile	Arg	His
				565					570					575	
Gly	Gln	Tyr	Cys	Asn	Arg	Cys	Ile	Val	Arg	Arg	Ser	Cys	Thr	Ser	Met
			580					585					590		
Leu	Ala	Tyr	His	Tyr	Ile	Val	Cys	Arg	Asp	Ala	Ser	Cys	Asp	Val	Pro
	595						600					605			
Lys	Cys	Arg	Glu	Arg	Val	Arg	Asn	Asp	Met	Asp	Asp				
	610					615					620				

<210>	202
<211>	2820
<212>	DNA
<213>	SHRIMP

<400> 202

atgtctgagc	cttcagttta	tgctttttatt	gacataaaaag	aaatagaaaa	tggttgggaa	60
aaagaattcg	ggctttttagt	acaaccaggga	cagaaatttag	ctcctttcag	ggatattttct	120
tatgactcaa	gcaaacttga	ttgtgacgca	ttttcttgca	taccttcaga	tatacttcac	180
tctgataatg	aaaaaagagt	aggagagtg	aactttgccc	aacacacctc	tgtctcattt	240
cctgtcaaga	accctgaggg	aaaaacattg	cgcctatttc	cggcatgtgg	tccagggtgt	300
taccggaggt	acaagcaaa	agaccccat	actggtttgc	cagtagccag	aggcgctcgt	360
atgcaagatc	acgttgacca	tgaacctgga	aataaaatgt	gtgaatatct	gaaccagagc	420
ttagtcatgt	gggctgctgt	cccttgata	cgacctggag	accttactga	aggttacaac	480
acaacacacg	tgcttggtt	tgattcaag	gaggatgacg	aaagggattc	aaaagaggtt	540
aaatatgaaa	atgtggtcat	ttcaaaggct	tatttgtgatt	tctttaaaca	gtattatgac	600
gcagactctg	gctcatgtta	tcgatctgga	tggatgaaat	ttgtccattt	aatgttttggg	660
cagtatttta	ctaattcttc	ttacaattta	gctaacccaa	aaccttaca	tttaactgga	720
aatacatggt	ctgagttagt	ttctgtattg	acagataacc	ctattgtaga	tgcgggtgct	780
gctccgtcca	gatctgaaat	ggatgaaat	atcaccaaga	agaagttaa	cgtattccct	840
tctgagcaga	catctgctcg	ccagaaagca	gagaatataa	tacgttctca	gtacggagat	900
ggtgtagaaa	tagaccatc	ttctgtggat	gctttaatgc	agtttgttaa	tagggaaggt	960
gtagctagaa	cagagaaaaa	atccgaccgc	ctcatgcgag	tggcagacgc	tgttatggat	1020
gcggctagtc	gccttcaagt	cagtggctcg	gacgacagtc	aatctagacg	attattgtta	1080
aaaaatatga	ttaaaatgag	tagaaacaac	ccagaatatg	caagacattt	ttccagttct	1140
ctcaaattaa	ttggagtaac	tttgccata	aaaagatctg	ttttctctaa	aggcgcttca	1200
gctaaaagaa	aggaaacggc	cattaataat	ggcgaacagc	atagaagaag	cagatggtca	1260
cccgagacgg	tgacagaaga	agatgcactt	ttatttgcaa	gagaaaatat	cactgaagac	1320
ccaaaacacc	ctgcgcctt	tgtggacatt	ttcactcac	cagatatcaa	ttcatctatc	1380
aaagcgggtt	cttcttctc	aatatggaac	gatatacttt	caagaatttc	ttcgaccaga	1440
aaactgcgaag	aaaaggcgag	tgttttcgtt	aaaaactctt	tggtagaagt	agtgcagacg	1500
ttcttggaac	ttttagaagg	taaaactgtt	tgcgacggat	acgaatggga	cgataatatt	1560
cctctgatga	taggcgtgga	ccaaatattg	agagaagtca	ttaaggcggc	cagtaatatg	1620
tgcgctagat	ttgcctcctc	agctctggag	tctagtttgg	ttactggctt	tatagactcg	1680
gcgagtgtca	tcacttctag	gttagccgta	caactggcag	ccagaacgtt	ctccgtattc	1740
ttggaggagt	ctgttataga	atttgtagtt	gccgcaagcc	ttcggctagc	gatacaggca	1800
tttgccgac	tggcaactct	tgccgcgtca	gccttaaccg	ttattggaat	gtttatatct	1860
gtaatacaag	tacttgggtt	gattttggat	cttgcgtag	ggttaggttg	gtacgatcac	1920
atttttagcc	cagaggattt	aaagaagcag	gttctagtgt	ttaggagaga	gtttgcaaag	1980
gcaggaaatg	tagatgtggg	tgtagctcaa	ccagtcaccc	ctgaagaaat	cgctcgctatc	2040
aacgttttcc	ttcaaactga	agaaaacggg	gaagaaaaga	aggaagaagg	agcacgaaaa	2100
tcaaagatgt	attttcttca	aaaatacttc	cattctactc	ctttgatggg	aaagaaacgt	2160
aagtttgtct	acatacaaga	agcagctcaa	gaatacttgg	gaggaagaac	aatgaaacgt	2220
tttgggcagc	gtataataac	agctgctgat	gatagtgaca	ccaccaccac	cacacaaqaq	2280

```

ggaaggaggg atgacgaaac agtgactaag aaaatgagga gtattattct agaaacaggt 2340
caaactctta aggattactc gtctgctgtt aactataacg cctcccgtct agattacgtg 2400
ggagaggaat gggtaagaaa tactgcccta aaagaagaga caaggagcaa cactactagt 2460
gataacctat tcaagaaaac tgtttctctt gctagtatgg ccggcgcat tctggttcta 2520
ggaatagggtg tattggtagc gtcccatatt acacttttac gtttcaccaa tattggtcta 2580
gcttttgcgt tcgcaggtct cctagcattt attgcactta tgagtatatc atatataaac 2640
atgaatgcta tgggtgtagt gaattcggac gcaatataca ggtctactgc tctagttgga 2700
gatatcaaaa cagaccccag aagagtagga atggtccagc gccacgtagg tgtcggggct 2760
aaatacaaca tgattacaga tttcgtctct ccaatgttag acgagatcga gagtgactaa 2820

```

&lt;210&gt; 203

&lt;211&gt; 931

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 203

```

Met Ser Glu Pro Ser Val Tyr Ala Phe Ile Asp Ile Lys Glu Ile Glu
1      5      10      15
Asn Gly Trp Glu Lys Glu Phe Gly Leu Val Gln Pro Gly Gln Lys
20     25     30
Leu Ala Pro Phe Arg Asp Ile Ser Tyr Asp Ser Ser Lys Leu Asp Cys
35     40     45
Asp Ala Phe Ser Cys Ile Pro Ser Asp Ile Leu His Ser Asp Asn Glu
50     55     60
Lys Arg Val Gly Glu Cys Asn Phe Ala Glu His Thr Ser Val Ser Phe
65     70     75     80
Pro Val Lys Asn Pro Glu Gly Lys Thr Leu Arg His Phe Thr Ala Cys
85     90     95
Gly Pro Gly Cys Tyr Arg Arg Tyr Lys Gln Arg Asp Pro His Thr Gly
100    105    110
Leu Pro Val Arg Val Leu Met Gln Asp His Val Asp His Glu Thr Gly
115    120    125
Asn Lys Met Cys Glu Tyr Leu Asn Gln Ser Leu Val Met Trp Ala Ala
130    135    140
Val Pro Trp Ile Arg Pro Gly Asp Leu Thr Glu Gly Tyr Asn Thr Thr
145    150    155    160
His Val Pro Gly Phe Ala Phe Lys Glu Asp Asp Glu Arg Asp Ser Lys
165    170    175
Arg Val Lys Tyr Glu Asn Val Val Ile Ser Lys Ala Tyr Cys Asp Phe
180    185    190
Phe Lys Gln Tyr Tyr Asp Ala Asp Ser Gly Ser Cys Tyr Arg Ser Gly
195    200    205
Trp Met Lys Phe Val His Leu Met Phe Gly Gln Tyr Phe Thr Asn Leu
210    215    220
Ser Tyr Asn Leu Ala Asn Pro Lys Pro Tyr Asn Leu Thr Gly Asn Thr
225    230    235    240
Trp Ser Asp Val Val Ser Val Leu Thr Asp Asn Pro Ile Val Asp Ala
245    250    255
Gly Ala Ala Pro Ser Arg Ser Glu Met Asp Glu Ile Ile Thr Lys Lys
260    265    270
Lys Phe Asn Val Phe Pro Ser Glu Gln Thr Ser Ala Arg Gln Lys Ala
275    280    285
Glu Asn Ile Ile Arg Ser Gln Tyr Gly Asp Gly Val Glu Ile Asp Pro
290    295    300
Ser Ser Val Asp Ala Leu Met Gln Phe Val Asn Arg Glu Gly Val Val
305    310    315    320
Gly Thr Glu Lys Lys Ser Asp Arg Leu Met Arg Val Ala Asp Ala Val
325    330    335
Met Asp Ala Ala Met Arg Leu Gln Val Met Gly Leu Asp Asp Ser Gln
340    345    350

```

Ser Arg Arg Leu Leu Leu Lys Asn Met Ile Lys Met Ser Arg Asn Asn  
 355 360 365  
 Pro Glu Tyr Ala Arg His Phe Ser Ser Ser Leu Lys Leu Ile Gly Val  
 370 375 380  
 Thr Leu Ala Ile Lys Arg Ser Val Phe Ser Lys Gly Ala Ser Ala Lys  
 385 390 395 400  
 Arg Lys Glu Thr Ala Ile Asn Asn Gly Glu Gln His Arg Arg Ser Arg  
 405 410 415  
 Trp Ser Pro Glu Thr Val Thr Glu Glu Asp Ala Leu Leu Phe Ala Arg  
 420 425 430  
 Glu Asn Ile Thr Glu Asp Pro Lys His Pro Ala Pro Phe Val Asp Ile  
 435 440 445  
 Leu His Ser Pro Asp Ile Asn Ser Ser Ile Lys Ser Gly Ser Ser Ser  
 450 455 460  
 Ser Ile Trp Asn Asp Ile Leu Ser Arg Ile Ser Ser Thr Arg Lys Leu  
 465 470 475 480  
 Glu Glu Lys Ala Ser Val Phe Val Lys Asn Leu Val Val Lys Val Val  
 485 490 495  
 Arg Gln Phe Leu Asp Ile Gly Lys Leu Phe Ser Asp Gly Tyr Glu Trp  
 500 505 510  
 Asp Asp Asn Ile Pro Leu Met Ile Gly Val Asp Gln Ile Leu Arg Glu  
 515 520 525  
 Val Ile Lys Ala Asn Met Cys Ala Arg Phe Ala Ser Ser Ala Leu Glu  
 530 535 540  
 Ser Ser Leu Val Thr Gly Phe Ile Asp Ser Ala Ser Ala Ile Thr Ser  
 545 550 555 560  
 Arg Leu Ala Val Gln Leu Ala Ala Arg Thr Phe Ser Val Phe Leu Glu  
 565 570 575  
 Glu Ser Val Ile Glu Phe Val Val Ala Ala Ser Leu Arg Leu Ala Ile  
 580 585 590  
 Gln Ala Phe Ala Asp Leu Ala Thr Leu Ala Ala Ser Ala Leu Thr Val  
 595 600 605  
 Ile Gly Ile Val Ile Phe Val Ile Gln Val Leu Gly Leu Ile Leu Asp  
 610 615 620  
 Leu Ala Leu Gly Leu Gly Trp Tyr Asp His Ile Phe Ser Pro Glu Asp  
 625 630 635 640  
 Leu Lys Lys Gln Val Leu Val Phe Arg Arg Glu Phe Ala Lys Ala Gly  
 645 650 655  
 Asn Val Asp Val Gly Val Ala Gln Pro Val Thr Pro Glu Glu Ile Val  
 660 665 670  
 Ala Ile Asn Val Phe Leu Gln Thr Glu Glu Asn Gly Glu Glu Lys Lys  
 675 680 685  
 Glu Glu Gly Ala Arg Lys Ser Lys Ile Asp Phe Leu Gln Lys Tyr Phe  
 690 695 700  
 His Ser Thr Pro Leu Met Gly Lys Lys Ser Lys Phe Val Tyr Ile Gln  
 705 710 715 720  
 Glu Ala Ala Gln Glu Tyr Leu Gly Gly Arg Thr Met Asn Ala Phe Gly  
 725 730 735  
 Gln Arg Ile Ile Thr Ala Ala Asp Asp Ser Asp Thr Thr Thr Thr  
 740 745 750  
 Gln Glu Gly Arg Arg Asp Asp Glu Thr Val Thr Lys Lys Met Arg Ser  
 755 760 765  
 Ile Ile Thr Gly Gln Thr Leu Lys Asp Tyr Ser Ser Ala Val Asn Tyr  
 770 775 780  
 Asn Ala Ser Arg Leu Asp Tyr Val Gly Glu Glu Trp Val Arg Asn Thr  
 785 790 795 800  
 Ala Leu Lys Glu Glu Thr Arg Ser Asn Thr Thr Ser Asp Asn Leu Phe  
 805 810 815  
 Lys Lys Thr Val Ser Leu Ala Ser Met Ala Gly Ala Phe Leu Val Leu  
 820 825 830  
 Gly Ile Gly Val Leu Val Ala Ser His Ile Thr Leu Leu Arg Phe Thr

835	840	845
Asn Ile Gly Leu Ala Phe	Ala Phe Ala Gly Leu	Leu Ala Phe Ile Ala
850	855	860
Leu Met Ser Ile Ser Tyr	Ile Asn Met Asn Ala	Met Gly Val Val Asn
865	870	875
Ser Asp Ala Ile Tyr Arg	Ser Thr Ala Leu Val	Gly Asp Ile Lys Thr
885	890	895
Asp Pro Arg Arg Val Gly	Met Val Gln Arg His	Val Gly Val Gly Ala
900	905	910
Lys Tyr Asn Met Ile Thr	Asp Phe Val Ser Pro	Met Leu Asp Glu Ile
915	920	925
Glu Ser Asp		
930		

&lt;210&gt; 204

&lt;211&gt; 3135

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 204

atggattcgt	tgactaatac	agtaacactc	ctcgtgaatg	accgtcttgg	aaatcatcga	60
acaaacaaac	caatcaccga	acaagatgtg	gaaaataactc	ttaaccttaa	cagtctagaa	120
agggcaagtc	ttttgaagtt	atattctgtt	ttcatcaaag	aaatgcagtc	ctattctgga	180
tgtataccca	agaacaagta	cacgaatgtg	caagaaatat	tcgaagatgg	actaattact	240
ttcgaatgga	gagatggaac	aaaagtacac	agatcagttt	caccaagtgc	ccctatacct	300
ctttctacaa	aaaaatcgcc	tcggtcctca	ccttcccctc	ctccatcgat	gccttctatt	360
aaagaagaag	aatttgaaga	agaatttgaa	gatgatgaag	aaatatacga	aacagatgaa	420
aatgtggaag	atttcataaa	tggtgatgga	gaagattcag	aagagggaaga	agaagaagat	480
ataattgttg	atgacgaaga	agaagagaat	gaagagggaag	aaaacaagta	cgttctcgca	540
ttctctaatac	atctgaggcg	ccagactgcc	gccgctgccg	ccgccgccgc	agctgctgct	600
gctgctgaca	ttgagaagaa	ggacaaaaac	cacgcagtta	gtgcgcatga	ctacacactg	660
tccgccctcc	agcaacagca	acaaaaactg	ctccagcaac	agcaacagca	acaacaccag	720
cagcgctcct	catctgagaa	ggtcacctcc	acaccaaca	aattcaacaa	gtttttactg	780
ccgagtaatg	gcttctcaga	acagaccgag	ctctttgttt	gtttcgatgt	ggataaaatt	840
gcgcaatata	atggactcgt	ggagctagac	atcttaccca	ttgttgctga	atacattatc	900
aacggcccttg	gtctgaaatg	cagtatggaa	actccccag	tgaaccctg	caggagaaag	960
gaagtgaag	atgtgtggtg	tcagcctaaa	actagctttg	aaaatgatgc	tgtggaagat	1020
aaacatctcg	cattcgcaga	atcgccata	cttcaaaggc	ctagagattt	ccctatccct	1080
aaaaaaatca	ccgcctattt	ttgtttagac	gattctgtag	acattaaaaa	cccctggggt	1140
tcgtgtccgc	ttttgaaaag	tggatcaaac	tttcgagtgt	ccgaatattc	gcgtcatttt	1200
aatgaattct	caggagttaa	aaatgacgat	gacacgtcct	caaacacttg	ctttatatac	1260
tctcaaaaaa	accccaacat	tgaatttgta	tcaaaattaa	atattgaatt	tgaggtaatg	1320
atggagggaa	ttataaccca	tagaaaagat	ttgttcgaga	cgggcatttt	gagcgattct	1380
tcattagcta	cggctatggc	attttgccac	ccaaaagcta	gagttcgaaa	tgttgcatgt	1440
ttttattttt	ctgtatatatt	accattctct	aaaataactc	gcaaagaaac	tataaaatgt	1500
tcagagacgg	ataaggtaca	tattggttca	gacgcgatct	tttctcccc	aagtgataat	1560
cctaataata	gtgctcacca	gaacaataac	aacaataata	acaataatac	cagtgtgaat	1620
atcgaggaca	gacctaaccg	aaataataat	ataagcagaa	aaatgaccat	cacaaactac	1680
caatgtatgg	cagtcaagga	aagatgcaca	aacaattgca	ctaacggtaa	ctatcccgat	1740
cgtggttaacc	agcacttgct	acatagtgtg	aaaggggaag	atttctttta	gatttttaaa	1800
aatagtaaag	tagattcatt	gaaaaaattg	agcagagtac	tgattcccgc	tcctccctct	1860
ggaaattata	catctaagtt	ttgtgataga	agctctatgt	gccatagctt	cttttgtaga	1920
gggatcgaac	cagtgtctac	ttctttctca	tcggacagtt	ttgaaaagac	taaacttggt	1980
ttgtatggta	aagtcgttga	cgttatcaat	agttattctg	ccataaaaa	ttcccataat	2040
aatagaatca	gggtcttttt	taactctgag	gaaaaagata	ataagactat	cccctctaga	2100
gccgaaagtg	caaaaaatgc	attcaaggat	atacttggtc	acgaatgtaa	taaagaacga	2160
gctgtttcat	attttgagca	aaacaaatta	tcctctaaag	atgggcatct	atctaacaag	2220
tggtggatcg	aacttaata	cttgaacatt	atgtttgaga	aacacgtgga	agatttttac	2280
aagaaatgtt	ctaaagtaaa	tgatgcagaa	tcttttaaag	atatttttta	tgattttgaa	2340
aaaacttgtg	ataaatacaa	aactgccaag	agggcaatta	ttggagcaca	agacccttct	2400

```

acttctactc cctctaaaaa ggagaatggt atcactagga ttattagtagc attatccgaa 2460
tttcattcaa aagatgaagc tacagtaagt gcccttctcg acaaaacaat gctcttggga 2520
tcgaggacaa taatgtctgg tgtagatgt gttatacgta acaatagtgt gttttcgggc 2580
tttgaaaata agaacactaa taataattgg gaacttgaga ttagacacta tgcatctct 2640
atgggaggtg ctgcagtgc aaagatttcc gatgaagatt tggaacaatt cacgcctgta 2700
agaggtgctg tctctgtcac tacagcacct aatgataagc tacctgtagg ggcacatcag 2760
acatggaagg atgaacaaac actaaaaaca aacactaaac gtaatagtct atatgactct 2820
tacaattcaa aaaggaataa tagggataat aataaaataa aaaatcggtc attaaaacta 2880
tcagatttta attggagaac acccaatatc tctattcaag aatttaaatgc aaataaagat 2940
gatgttaaca agaagaggta cgcagaagtc gtggcgctcag ctgctccaaa gtcaccttca 3000
ccaacgagca gcagcagcag caacagcaac agcagcagcc ctctcttttc accgctctca 3060
ccaacagtga agaatagtaa taataaacca ttgtatatcc ctccccataa aagaatgacc 3120
actactgctg ttgga                                     3135

```

&lt;210&gt; 205

&lt;211&gt; 1036

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 205

```

Met Asp Ser Leu Thr Asn Thr Val Thr Leu Leu Val Asn Asp Arg Leu
1          5          10          15
Gly Asn His Arg Thr Asn Lys Pro Ile Thr Glu Gln Asp Val Glu Asn
20          25          30
Thr Leu Asn Leu Asn Ser Leu Glu Arg Ala Ser Leu Leu Lys Lys Val
35          40          45
Phe Ile Lys Glu Met Gln Ser Tyr Ser Gly Cys Ile Pro Lys Asn Lys
50          55          60
Tyr Thr Asn Val Gln Glu Ile Phe Glu Asp Gly Leu Ile Thr Phe Glu
65          70          75          80
Trp Arg Asp Gly Thr Lys Val His Arg Ser Val Ser Pro Ser Ser Pro
85          90          95
Ile Pro Leu Ser Thr Lys Lys Ser Pro Arg Ser Ser Pro Ser Pro Pro
100         105         110
Pro Ser Met Pro Ser Ile Lys Glu Glu Glu Phe Glu Glu Glu Phe Glu
115         120         125
Asp Asp Glu Glu Ile Tyr Glu Thr Asp Glu Asn Val Glu Asp Phe Ile
130         135         140
Asn Gly Asp Gly Glu Asp Ser Glu Glu Glu Glu Glu Glu Asp Ile Ile
145         150         155         160
Val Asp Asp Glu Glu Glu Glu Asn Glu Glu Gly Glu Asn Lys Tyr Val
165         170         175
Leu Ala Phe Ser Asn His Leu Arg Arg Gln Thr Ala Ala Ala Ala Ala
180         185         190
Ala Ala Ala Ala Ala Ala Ala Ala Asp Ile Glu Lys Lys Asp Lys Asn
195         200         205
His Ala Val Ser Ala His Asp Tyr Thr Leu Ser Ala Leu Gln Gln Gln
210         215         220
Gln Gln Lys Leu Leu Gln Gln Gln Gln Gln Gln His Gln Gln Arg
225         230         235         240
Ser Ser Ser Glu Lys Val Thr Ser Thr Pro Asn Lys Phe Asn Lys Phe
245         250         255
Leu Leu Pro Ser Asn Gly Phe Ser Glu Gln Thr Glu Leu Phe Val Cys
260         265         270
Phe Asp Val Asp Lys Ile Ala Gln Tyr Asn Gly Leu Val Glu Leu Asp
275         280         285
Ile Leu Pro Ile Val Ala Glu Tyr Ile Ile Asn Gly Leu Gly Leu Lys
290         295         300
Cys Ser Met Pro Pro Val Lys Pro Cys Arg Arg Lys Glu Val Lys Asp
305         310         315         320
Val Trp Cys Gln Pro Lys Thr Ser Phe Glu Asn Asp Ala Val Glu Asp

```

				325					330					335	
Lys	His	Leu	Ala	Phe	Ala	Glu	Ser	Pro	Ile	Leu	Gln	Arg	Pro	Arg	Asp
			340					345					350		
Phe	Pro	Ile	Pro	Lys	Lys	Ile	Thr	Ala	Tyr	Phe	Cys	Leu	Asp	Asp	Ser
		355					360					365			
Val	Asp	Ile	Lys	Asn	Pro	Trp	Gly	Ser	Cys	Pro	Leu	Leu	Lys	Ser	Gly
	370					375					380				
Ser	Asn	Phe	Arg	Val	Ser	Glu	Tyr	Ser	Arg	His	Phe	Asn	Glu	Phe	Ser
385				390					395					400	
Gly	Val	Lys	Asn	Asp	Asp	Asp	Thr	Ser	Ser	Asn	Thr	Cys	Phe	Ile	Tyr
			405					410					415		
Ser	Gln	Lys	Asn	Pro	Asn	Ile	Glu	Ile	Val	Ser	Lys	Leu	Asn	Ile	Glu
			420					425					430		
Phe	Glu	Val	Met	Met	Glu	Gly	Ile	Ile	Thr	Lys	Asp	Leu	Phe	Glu	Thr
		435					440					445			
Gly	Ile	Leu	Ser	Asp	Ser	Ser	Leu	Ala	Thr	Ala	Met	Ala	Phe	Cys	His
	450				455					460					
Pro	Lys	Ala	Arg	Val	Arg	Asn	Val	Phe	Tyr	Phe	Ser	Val	Tyr	Leu	Pro
465				470					475					480	
Phe	Ser	Lys	Ile	Thr	Arg	Lys	Glu	Thr	Ile	Lys	Cys	Ser	Glu	Thr	Asp
			485					490					495		
Lys	Val	His	Ile	Gly	Ser	Asp	Ala	Ile	Phe	Ser	Pro	Pro	Ser	Asp	Asn
			500					505					510		
Pro	Asn	Ile	Ser	Ala	His	Gln	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn	Asn
		515					520					525			
Thr	Ser	Val	Asn	Ile	Glu	Asp	Arg	Pro	Ile	Arg	Asn	Asn	Asn	Ile	Ser
	530				535					540					
Arg	Lys	Met	Thr	Ile	Thr	Asn	Tyr	Gln	Cys	Met	Ala	Cys	Lys	Glu	Arg
545				550					555					560	
Cys	Thr	Asn	Asn	Cys	Thr	Asn	Gly	Asn	Tyr	Pro	Asp	Arg	Gly	Asn	Gln
			565					570					575		
His	Leu	Ser	His	Ser	Val	Lys	Gly	Glu	Asp	Phe	Phe	Lys	Ile	Leu	Asn
			580					585				590			
Asn	Ser	Lys	Val	Asp	Ser	Leu	Lys	Lys	Leu	Ser	Arg	Val	Leu	Ile	Pro
		595				600						605			
Ala	Pro	Pro	Ser	Gly	Asn	Tyr	Thr	Ser	Lys	Phe	Cys	Asp	Arg	Ser	Ser
	610				615					620					
Met	Cys	His	Ser	Phe	Phe	Cys	Arg	Gly	Ile	Glu	Pro	Val	Ser	Thr	Ser
625				630					635					640	
Phe	Ser	Ser	Asp	Ser	Phe	Glu	Lys	Thr	Lys	Leu	Val	Leu	Tyr	Gly	Lys
			645					650					655		
Val	Val	Asp	Val	Ile	Asn	Ser	Tyr	Ser	Ala	Ile	Lys	Thr	Ser	His	Asn
			660					665				670			
Asn	Arg	Ile	Arg	Val	Phe	Phe	Asn	Ser	Glu	Glu	Lys	Asp	Asn	Lys	Thr
		675													

Asp Glu Ala Thr Val Ser Ala Leu Leu Asp Lys Thr Met Leu Leu Gly  
 820 825 830  
 Ser Arg Thr Ile Met Ser Gly Val Arg Cys Val Ile Arg Asn Asn Ser  
 835 840 845  
 Val Phe Ser Gly Phe Glu Asn Lys Asn Thr Asn Asn Trp Glu Leu  
 850 855 860  
 Glu Ile Arg His Tyr Val Ile Ser Met Gly Gly Ala Ala Val Thr Lys  
 865 870 875 880  
 Ile Ser Asp Glu Asp Leu Glu Gln Phe Thr Pro Val Arg Gly Ala Val  
 885 890 895  
 Ser Val Thr Thr Ala Pro Asn Asp Lys Leu Pro Val Gly Ala His Gln  
 900 905 910  
 Thr Trp Lys Asp Glu Gln Thr Leu Lys Thr Asn Thr Lys Arg Asn Ser  
 915 920 925  
 Leu Tyr Asp Ser Tyr Asn Ser Lys Arg Asn Asn Arg Asp Asn Asn Lys  
 930 935 940  
 Ile Lys Asn Arg Ser Leu Lys Leu Ser Asp Phe Asn Trp Arg Thr Pro  
 945 950 955 960  
 Asn Ile Ser Ile Gln Glu Phe Asn Ala Asn Lys Asp Asp Val Asn Lys  
 965 970 975  
 Lys Arg Tyr Ala Glu Val Val Ala Ser Ala Ala Pro Lys Ser Pro Ser  
 980 985 990  
 Pro Thr Ser Ser Ser Ser Asn Ser Asn Ser Ser Ser Pro Pro Leu  
 995 1000 1005  
 Ser Pro Leu Ser Pro Thr Val Lys Asn Ser Asn Asn Lys Pro Leu Tyr  
 1010 1015 1020  
 Ile Pro Pro His Lys Arg Met Thr Thr Thr Ala Val  
 1025 1030 1035

<210> 206  
 <211> 1082  
 <212> DNA  
 <213> SHRIMP

<400> 206  
 atgaagatat gccagatttc ttcccctacc ctcaccctga gcatcccat ggagggcgctc 60  
 taccacgtga agcagctcct ccacttaaaag gtgcacttgg acgtaaaagg cgtgaagcag 120  
 ctctccact taaaggtgcg cttggacgta agagggcgga agcagaatcc ttggaggaag 180  
 aacttggtgct tgctgaagaa gaacgtgaaa agcgcggaagc agtccccca cttaaagggtg 240  
 cacttggacg tgaaaagcgc gaagcagctc cccacttaa aggtgcactt ggacgtaaga 300  
 ggcgcgaagc agtccccca cttaaagggtg cgcttggacg tgaaaagcgc gaagcagctc 360  
 cccacttaa aggtgcactt ggacgtaaga ggcgcgaagc agtccccca cttaaagggtg 420  
 cgcttggacg taagaggcgc gaagcagaat ccttggagga agaacttgtg tctgctgaag 480  
 aagaacgtga aaagcgcgaa gcagctcccc cacttaaagg tgcacttgga cgtaaaaggc 540  
 gtgaagcagc tcctccactt aaaggtgctc ttggacgtaa gaggcgcgaa gcagctcccc 600  
 cacttaaagg tgcacttgga cgtaagaggc gcgaagcaga atccttggag gaagaacttg 660  
 tgtctgttga agaagaacgt gaaaagcgcg aagcagctcc cccacttaaa ggtgctcttg 720  
 gacgtaagag gcgcgaagca gctccccca ttaaagggtg tcttggacgt aagaggcgcg 780  
 aagcagctcc cccacttaaa ggtgctcttg gacgtaagag gcgcgaagca gaatccttgg 840  
 aggaagaact tgtgtctgct gaagaagaac gtgaaaagcg cgaagcagct cccccactta 900  
 aaggtgctct tggacgtaag aggcgcgaag cagctcccc acttaaagggt gcacttggac 960  
 gtaagaggcg cgaagcagca gcagcagcta tgctcccc tgaagacgat ctcgacttct 1020  
 ttacgcacc tggtgctttg cctctacatg gagtatggaa agcaccagaa cctacagggt 1080  
 aa 1082

<210> 207  
 <211> 361  
 <212> PRT  
 <213> SHRIMP

WO 01/38351

PCT/US00/28888

292

<220>  
 <221> VARIANT  
 <222> (1)...(361)  
 <223> Xaa = Any Amino Acid

&lt;400&gt; 207

Met	Lys	Ile	Cys	Gln	Ile	Ser	Ser	Pro	Thr	Leu	Thr	Leu	Ser	Ile	Pro
1				5					10					15	
Leu	Glu	Gly	Val	Tyr	His	Val	Lys	Gln	Leu	Leu	His	Leu	Lys	Val	His
			20					25					30		
Leu	Asp	Val	Lys	Gly	Val	Lys	Gln	Leu	Leu	His	Leu	Lys	Val	Arg	Leu
		35					40					45			
Asp	Val	Arg	Gly	Ala	Lys	Gln	Asn	Pro	Trp	Arg	Lys	Asn	Leu	Cys	Leu
		50				55					60				
Leu	Lys	Lys	Asn	Val	Lys	Ser	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val
65					70					75					80
His	Leu	Asp	Val	Lys	Ser	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	His
			85					90					95		
Leu	Asp	Val	Arg	Gly	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	Arg	Leu
			100					105					110		
Asp	Val	Lys	Ser	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	His	Leu	Asp
		115					120					125			
Val	Arg	Gly	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	Arg	Leu	Asp	Val
		130				135					140				
Arg	Gly	Ala	Lys	Gln	Asn	Pro	Trp	Arg	Lys	Asn	Leu	Cys	Leu	Leu	Lys
145					150					155					160
Lys	Asn	Val	Lys	Ser	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	His	Leu
				165					170					175	
Asp	Val	Lys	Gly	Val	Lys	Gln	Leu	Leu	His	Leu	Lys	Val	Arg	Leu	Asp
			180					185					190		
Val	Arg	Gly	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	His	Leu	Asp	Val
		195					200					205			
Arg	Gly	Ala	Lys	Gln	Asn	Pro	Trp	Arg	Lys	Asn	Leu	Cys	Leu	Leu	Lys
		210				215					220				
Lys	Asn	Val	Lys	Ser	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	Leu	Leu
225					230					235					240
Asp	Val	Arg	Gly	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	Leu	Leu	Asp
				245					250					255	
Val	Arg	Gly	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	Leu	Leu	Asp	Val
			260					265					270		
Arg	Gly	Ala	Lys	Gln	Asn	Pro	Trp	Arg	Lys	Asn	Leu	Cys	Leu	Leu	Lys
		275					280					285			
Lys	Asn	Val	Lys	Ser	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	Leu	Leu
		290				295					300				
Asp	Val	Arg	Gly	Ala	Lys	Gln	Leu	Pro	His	Leu	Lys	Val	His	Leu	Asp
305					310					315					320
Val	Arg	Gly	Ala	Lys	Gln	Gln	Gln	Gln	Leu	Cys	Leu	Pro	Leu	Lys	Thr
				325					330					335	
Ile	Ser	Thr	Ser	Phe	Thr	His	Leu	Leu	Leu	Cys	Leu	Tyr	Met	Glu	Tyr
			340					345						350	
Gly	Lys	His	Gln	Asn	Leu	Gln	Val	Xaa							
		355					360								

<210> 208  
 <211> 816  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 208

atggacgtcg agttcgggtt cttccacggt ctgctctcca aggcccttct cccagatgaa 60



```

aaacatcaac ccgttataag gcgtctttgt gcggatgatt ctagaaataa gggagaggat 120
ggctgctgct cgttctgtgg aagaagagga acaggagaga gcaataactgc gtgccttgaa 180
caactaatag acgtttgttc ctttatagga actgtctcat ctattggtac aattatcaat 240
tctaattcttt caaccagttg ttctagacta caaaaaacgt cagacagtta tgcggcatta 300
tcccatttcta gttttctgga tgtggtatat ccaagtttga agaaaacaac tgaagacgta 360
ttgcctcatt ctttacgtgc catttggaat aaacaacttc caaagttgta tgaaaaaact 420
cttcaaccce tagaagaaga ggatattggg tataaggatt atgttgtttc aattgaagac 480
gacgacaatg ttgatgatgg tgaccaacaa gaacaaatga ttattgatga agaattcttat 540
aaaactattg gagaaaaatc aaccattgaa ctgataggca tgtataacaa taacaagttt 600
ggtaatgaat ttataaggat tcctttaaga gaaactgcgt tgcacgcaca atctctgagg 660
tacgacactg aagctaaatt tgtaaccac aaggactcta tacctctatt ttatgaaaac 720
agcacgtgca catgtaagga acgtcttatt gatttttctg agagacaact acaacaacta 780
aaacaagatg gaatggataa accaacggac aagtag 816

```

<210> 209  
 <211> 269  
 <212> PRT  
 <213> SHRIMP

```

<400> 209
Met Asp Val Glu Phe Gly Phe Phe His Gly Leu Leu Ser Lys Ala Leu
 1          5          10          15
Leu Pro Asp Glu Lys His Gln Pro Val Ile Arg Arg Leu Cys Ala Asp
 20          25          30
Asp Ser Arg Asn Lys Gly Glu Asp Gly Cys Cys Ser Phe Cys Gly Arg
 35          40          45
Arg Gly Thr Gly Glu Ser Asn Thr Ala Cys Leu Glu Gln Leu Ile Asp
 50          55          60
Val Cys Ser Phe Ile Gly Thr Val Ser Ser Ile Gly Thr Ile Ile Asn
 65          70          75          80
Ser Asn Leu Ser Thr Ser Cys Ser Arg Leu Gln Lys Thr Ser Asp Ser
 85          90          95
Tyr Ala Ala Leu Ser His Ser Ser Phe Leu Asp Val Val Tyr Pro Ser
100          105          110
Leu Lys Lys Thr Thr Glu Asp Val Leu Pro His Ser Leu Arg Ala Ile
115          120          125
Trp Asn Lys Gln Leu Pro Lys Leu Tyr Glu Lys Thr Leu Gln Pro Ile
130          135          140
Glu Glu Glu Asp Ile Gly Tyr Lys Asp Tyr Val Val Ser Ile Glu Asp
145          150          155          160
Asp Asp Asn Val Asp Asp Gly Asp Gln Gln Glu Gln Met Ile Ile Asp
165          170          175
Glu Glu Ser Tyr Lys Thr Ile Gly Glu Lys Ser Thr Ile Glu Leu Ile
180          185          190
Gly Met Tyr Asn Asn Asn Lys Phe Gly Asn Glu Phe Ile Arg Ile Pro
195          200          205
Leu Arg Glu Thr Ala Leu His Ala Gln Ser Leu Arg Tyr Asp Thr Glu
210          215          220
Ala Lys Phe Val Asn His Lys Asp Ser Ile Pro Leu Phe Tyr Glu Asn
225          230          235          240
Ser Thr Cys Thr Cys Lys Glu Arg Leu Ile Asp Phe Ser Gln Leu Gln
245          250          255
Gln Leu Lys Gln Asp Gly Met Asp Lys Pro Thr Asp Lys
260          265

```

<210> 210  
 <211> 3813  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 210

atggtgctaa	ctctttcctg	tacgactagg	cgcgtagcgt	ctagcaaggg	gaattttctct	60
aaggaagatg	cgggtgttggg	gaaccagttc	cccattttta	agaaatcaaa	caacttgttca	120
attgcaagac	ctccctcaat	agaatctttt	tctgcatcag	tggaaaaaat	attcagggaa	180
tggaacgaaa	gtgggggaga	aaaaattttc	gacatatctc	agaatgaaga	agaatggatg	240
gatatcatat	ccttagtgga	aagtgtatat	gaacctgtat	tttctaaatc	acttaaacct	300
gataaattgg	cagataaaac	atgtctaacc	gcggctgcct	ttgcagcact	agcttctgcc	360
gtggatgaaa	aattgacaat	cttatcagg	agtgtatggg	gtgtgcttca	acgtacaaca	420
aaggttatga	aaaaggaccc	caaaaaata	gcagaatctc	ttttaataa	tgaaaaatgg	480
acatctat	tattggacag	gttaaaaaa	gccaaagaa	ttctaagcag	acgaggtgca	540
ctgaaaagcg	ccgaaagagt	agaagtactt	catcggttga	ataaactcaa	ggaggctcct	600
cttccccacc	atccgagcct	atttgataat	tttagtgagg	gaaaaacatc	agcagtatct	660
gctggaacag	tcacgcgcat	agatatgcac	ttcaaattgg	ttgaacatat	ttttaagggtc	720
tccttttagaa	aatgggggtcc	ctgtggagat	aaaactgaaa	gcggggaaga	agaagatgag	780
gaagaagaag	aagaagaaaa	gaaacattcc	atatcaagat	tcgtgcttca	atttatgaag	840
ggacacaacg	ggcaacatta	tcataggccc	gaaagtgcct	ctgtttactt	ttgtgattat	900
tatgactatt	tggcctacag	gaatctccct	aatgagtaca	aattatcgtc	aatgcaccc	960
ggcacattca	atatggagga	tttacctttc	cgccctttcg	cagtaccttc	aacttataag	1020
acagaattag	agtacaaaag	gtttgtgcaa	tcaacaaatc	ttccccagct	aagtttctgac	1080
tatggggagt	ttttatgtta	ctgtatcttc	ggagcagatt	gttacaacaa	cctgggggag	1140
gtggttagatt	ctctagaaaa	tagttccatg	atatcatttg	attctcagac	attgagtggg	1200
gtgtataaga	acactgctaa	ttacaaaagg	ttggggaaga	aaagaaacgg	aatagccgat	1260
ttggccgtta	ggagtatggc	agaatttatc	cgcactgaag	cgcataaggc	attgacagca	1320
gaagagatgg	aagaagaaga	agaggaagaa	gaagcggaag	aagaagcgat	ggaccaggag	1380
cctgcagaag	tagacttcc	ttcagtgcct	catttacgcc	gtaaaattcg	tcaagctgtt	1440
tctgtgttaa	ataactttgt	ggagaacgat	ctttctatat	tggtttctaa	cttcaagaat	1500
gtgttaaccg	atgatactgt	atcaggaaca	gatacggaca	actttggttc	tagtggagaa	1560
tttgaagcat	tatcttccca	tttattccct	tcaagaatat	tggatgaagt	gcacattctt	1620
aggaatactg	atatacaaa	aaccctat	tcaacgcacg	tgtctctgtc	ggataaatct	1680
ccccctagcc	gtgtccgtgg	aagcaatgtc	aactttaata	ataacgctgg	gaacatttct	1740
tccttgcaaa	cgtatggcgg	tatagaagag	ttgcctgaaa	atgtactagt	cggtttgtcc	1800
ggaggaattg	aagataccga	catgtattcc	ggagcagatg	ttgttgtcgt	atgggaggtg	1860
tgtgatggag	gaaaagtgtc	aagtgtcacc	ttcaattgtg	gtgataattt	tatccagctc	1920
catgaaaaaa	cagcagaac	ttttaaggat	gatacggatt	tagttgaacg	aataagagat	1980
gtgcttcaga	ctgcaagtaa	gaccggaac	cttaacaaaa	aagcatattc	aaggaagaac	2040
atctacgctg	ttttgcgtga	aaatggcatt	gagcgccccg	gggacgattt	tacagaaaag	2100
gggattgtc	tcaaggataa	aacaaatcaa	ccccctcccc	ctgcaagaag	tgccaagata	2160
acggttgaag	agatcaagg	atttttcagc	ggttttcgtg	acatttttga	gacgagggcg	2220
ctcaccacat	atagtgcaga	aaccttcaga	gatttaggcc	aaggcatagt	aaaagagacc	2280
gaaggactga	cagctgcaac	agtggcagaa	acatccttct	ctgaagggtt	agctgaaagt	2340
ttaaggctctg	atgcgaatct	aggtctagaa	ttttcagagg	acgccaaaac	ggttgtattc	2400
aaaaatgaca	cctctcgttc	tttattggaa	gaaactaggg	cattaagagc	aaacaatact	2460
tctttttcgt	cgtttgcaag	ggacatgggc	gtccaagtta	gtgccgattt	agatgctgaa	2520
tttgcctgag	agatgagaga	aacatacccc	gatgcagccc	ttgaacaaaa	cttgaaagat	2580
ctcgacaaat	tcgaagagac	tataccagaa	agtcaagtga	agaaactaaa	gaaaatagac	2640
agttatttga	cagagaatcc	agaaagggct	ggcaaagaaa	ttaacgacac	tgaactgtca	2700
aaggctacag	attcagatatt	ggggaagaaa	ctaggcaatg	cagttacagt	gttgatgaac	2760
aactttggaa	aggttacaat	tgtagttagg	gcttctgtgg	tggccggggt	tttaggtcca	2820
cccgctgctg	ccctgggtgc	tgcgtccaga	ggggcacatc	tcaacgctcg	ggaccacacc	2880
agccctaag	gtgtcatcag	ttataaaatt	gtggactttt	cttgtgcaga	tagaaacacc	2940
ggatgggcta	agccaacca	gcaccggttc	agggagaaa	tagaccatgt	tatcgacta	3000
gatgcatcat	tcttaactga	aaatggagca	tatgtattcc	ctgaagacgg	aggacccaaa	3060
tcgaaatata	aggcctacgc	accaatctgt	ggaacaaaag	atgctgctca	aggagaatgt	3120
ggatcttggg	caacattcga	cgaccgcgat	tctgtattgc	cttgggtggc	aagcatgaaa	3180
gatttgcccta	aaggacaatc	cctctcctgc	gataaaggga	tgtccacttt	aaaggcagtt	3240
tcttccgttc	ttttgtccat	aggaaggat	gttgcagagg	ctatttttga	ggttgcagag	3300
gacgccgtgg	tgggggtggc	gagcaaggca	atctcagctg	taataaataa	ccccctgttc	3360
atatttggag	tgccctcttg	atttgggtata	gctgctacac	gcctcaatcc	atccaactgg	3420
aaaactggcc	tcattgtatt	ttcaatacta	ctagtgttca	tactgatagt	tcgcttcttt	3480
gcagggtcgg	gcccgttaac	cctgaattgg	tttgggtgaa	agaattcagc	taaaaggaaa	3540
cagactgaac	aattcgaaga	cgggggagga	aatcgttcaa	aaatagtatt	ggcagaaaag	3600

gacaacgccca atagtaaact tcaatcgagg aggaatgaaa ctgggcccac gagattagag 3660  
 gagcttcctg ggcataaaga ttgcgccca gttttcttcc ctgccacaac aaattattcc 3720  
 aaatctgccca agattctggg ctacaaatct aaacccttca acgactttta tacaaaaata 3780  
 ataaacacag acatcataaa aatggatagg taa 3813

<210> 211

<211> 1264

<212> PRT

<213> SHRIMP

<400> 211

Met	Val	Leu	Thr	Leu	Ser	Cys	Thr	Thr	Arg	Arg	Val	Ala	Ser	Ser	Lys
1				5					10					15	
Gly	Asn	Phe	Ser	Lys	Glu	Asp	Ala	Val	Leu	Gly	Asn	Gln	Phe	Pro	Ile
			20					25					30		
Leu	Lys	Lys	Ser	Asn	Asn	Leu	Ser	Ile	Ala	Arg	Pro	Pro	Ser	Ile	Glu
		35				40						45			
Ser	Phe	Ser	Ala	Ser	Val	Glu	Lys	Ile	Phe	Arg	Glu	Trp	Asn	Glu	Ser
	50					55					60				
Gly	Gly	Glu	Lys	Ile	Phe	Asp	Ile	Ser	Gln	Asn	Glu	Glu	Trp	Met	
65					70					75				80	
Asp	Ile	Ile	Ser	Leu	Val	Glu	Ser	Val	Tyr	Glu	Pro	Val	Phe	Ser	Lys
			85						90					95	
Ser	Leu	Lys	Pro	Asp	Lys	Leu	Ala	Asp	Lys	Thr	Cys	Leu	Thr	Ala	Ala
			100					105					110		
Ala	Phe	Ala	Ala	Ser	Ala	Val	Asp	Glu	Lys	Leu	Thr	Ile	Leu	Ser	Gly
		115						120				125			
Ser	Asp	Gly	Ser	Val	Leu	Gln	Arg	Thr	Thr	Lys	Val	Met	Lys	Lys	Asp
	130					135					140				
Pro	Lys	Lys	Ile	Ala	Glu	Ser	Leu	Leu	Asn	Asn	Glu	Lys	Trp	Thr	Ser
145					150					155					160
Ile	Leu	Leu	Asp	Arg	Leu	Lys	Thr	Ala	Lys	Lys	Leu	Leu	Ser	Arg	Arg
			165						170					175	
Gly	Ala	Leu	Lys	Ser	Ala	Glu	Arg	Val	Glu	Val	Leu	His	Arg	Leu	Asn
			180					185					190		
Lys	Leu	Lys	Glu	Ala	Pro	Leu	Pro	His	His	Pro	Ser	Leu	Phe	Asp	Asn
		195					200					205			
Phe	Ser	Gly	Gly	Lys	Thr	Ser	Ala	Val	Ser	Ala	Gly	Thr	Val	Ile	Ala
	210					215					220				
Ser	Asp	Met	His	Phe	Lys	Leu	Val	Glu	His	Ile	Phe	Lys	Val	Ser	Phe
225					230					235					240
Arg	Lys	Trp	Gly	Pro	Cys	Gly	Asp	Lys	Thr	Glu	Ser	Gly	Glu	Glu	Glu
			245						250					255	
Asp	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Lys	Lys	His	Ser	Ile	Ser	Arg	Phe
		260						265					270		
Val	Leu	Gln	Phe	Met	Asn	Gly	His	Asn	Gly	Gln	His	Tyr	His	Arg	Pro
		275						280				285			
Glu	Ser	Ala	Ser	Val	Tyr	Phe	Cys	Asp	Tyr	Tyr	Asp	Tyr	Leu	Ala	Tyr
	290					295					300				
Arg	Asn	Leu	Pro	Asn	Glu	Tyr	Lys	Leu	Ser	Ser	Met	His	Pro	Gly	Thr
305					310						315				320
Phe	Asn	Met	Glu	Asp	Leu	Pro	Phe	Arg	Pro	Phe	Ala	Val	Pro	Ser	Thr
			325						330					335	
Tyr	Lys	Thr	Glu	Leu	Glu	Tyr	Lys	Arg	Phe	Val	Gln	Ser	Thr	Asn	Leu
		340						345					350		
Pro	Gln	Leu	Ser	Phe	Asp	Tyr	Gly	Glu	Phe	Leu	Cys	Tyr	Cys	Ile	Phe
		355					360					365			
Gly	Ala	Asp	Trp	Tyr	Lys	His	Leu	Gly	Asp	Val	Val	Asp	Ser	Leu	Glu
	370					375					380				
Asn	Ser	Ser	Met	Ile	Ser	Phe	Asp	Ser	Gln	Thr	Leu	Ser	Gly	Val	Tyr
385					390					395					400

Lys	Asn	Thr	Ala	Asn	Tyr	Lys	Arg	Leu	Gly	Lys	Lys	Arg	Asn	Gly	Ile
				405					410					415	
Ala	Asp	Leu	Ala	Val	Arg	Ser	Met	Ala	Glu	Phe	Ile	Arg	Thr	Glu	Ala
			420					425					430		
His	Lys	Ala	Leu	Thr	Ala	Glu	Glu	Met	Glu	Glu	Glu	Glu	Glu	Glu	Glu
		435					440					445			
Glu	Ala	Glu	Glu	Glu	Ala	Met	Asp	Gln	Glu	Pro	Ala	Glu	Val	Asp	Phe
	450					455				460					
Leu	Ser	Val	Pro	His	Leu	Arg	Arg	Lys	Ile	Arg	Gln	Ala	Val	Ser	Val
465					470					475					480
Leu	Asn	Asn	Phe	Val	Glu	Asn	Asp	Leu	Ser	Ile	Leu	Val	Ser	Asn	Phe
			485					490						495	
Lys	Asn	Val	Leu	Thr	Asp	Asp	Thr	Val	Ser	Gly	Thr	Asp	Thr	Asp	Asn
			500					505						510	
Phe	Gly	Ser	Ser	Gly	Glu	Phe	Glu	Ala	Leu	Ser	Ser	His	Leu	Phe	Leu
		515					520					525			
Ser	Arg	Ile	Leu	Asp	Glu	Val	His	Ile	Leu	Arg	Asn	Thr	Asp	Ile	Gln
	530					535					540				
Arg	Thr	Leu	Phe	Ser	Thr	His	Val	Ser	Leu	Ser	Asp	Lys	Ser	Pro	Pro
545						550				555					560
Ser	Arg	Val	Arg	Gly	Ser	Asn	Val	Asn	Phe	Asn	Asn	Asn	Ala	Gly	Asn
				565					570					575	
Ile	Ser	Ser	Leu	Gln	Thr	Tyr	Gly	Gly	Ile	Glu	Glu	Leu	Pro	Glu	Asn
			580					585					590		
Val	Leu	Val	Gly	Leu	Ser	Gly	Gly	Phe	Glu	Asp	Thr	Asp	Met	Tyr	Ser
		595					600					605			
Gly	Glu	Asp	Val	Val	Val	Val	Trp	Asp	Gly	Cys	Asp	Gly	Gly	Lys	Val
	610					615					620				
Leu	Ser	Val	Thr	Phe	Asn	Cys	Gly	Asp	Asn	Phe	Ile	Gln	Leu	His	Glu
625					630					635					640
Lys	Thr	Ala	Glu	Thr	Phe	Lys	Asp	Asp	Thr	Asp	Leu	Val	Glu	Arg	Ile
				645						650				655	
Arg	Asp	Val	Leu	Gln	Thr	Ala	Ser	Lys	Thr	Gly	Asn	Leu	Asn	Lys	Lys
			660					665					670		
Ala	Tyr	Ser	Arg	Lys	Asn	Ile	Tyr	Ala	Val	Leu	Arg	Glu	Asn	Gly	Ile
		675					680					685			
Glu	Arg	Pro	Gly	Asp	Asp	Phe	Thr	Glu	Lys	Gly	Ile	Ala	Leu	Lys	Asp
	690					695					700				
Lys	Thr	Asn	Gln	Pro	Pro	Pro	Pro	Ala	Arg	Ser	Ala	Lys	Ile	Thr	Val
705					710					715					720
Glu	Gly	Val	Lys	Gly	Phe	Phe	Ser	Gly	Phe	Arg	Asp	Ile	Thr	Arg	Ala
				725					730					735	
Leu	Thr	Thr	Tyr	Ser	Ala	Glu	Thr	Phe	Arg	Asp	Leu	Gly	Gln	Gly	Ile
			740					745					750		
Val	Lys	Glu	Thr	Glu	Gly	Leu	Thr	Ala	Ala	Thr	Val	Ala	Glu	Thr	Ser
		755					760					765			
Phe	Ser	Glu	Gly	Leu	Ala	Glu	Ser	Leu	Arg	Ser	Asp	Ala	Asn	Leu	Gly
	770					775					780				
Leu	Glu	Phe	Ser	Glu	Asp	Ala	Lys	Thr	Val	Val	Phe	Lys	Asn	Asp	Thr
785					790					795					800
Ser	Arg	Ser	Leu	Leu	Glu	Glu	Thr	Arg	Ala	Leu	Arg	Ala	Asn	Asn	Thr
			805						810					815	
Ser	Phe	Ser	Ser	Phe	Ala	Arg	Asp	Met	Gly	Val	Gln	Val	Ser	Ala	Asp
			820					825					830		
Leu	Asp	Ala	Glu	Phe	Ala	Ala	Glu	Met	Arg	Glu	Thr	Tyr	Pro	Asp	Ala
		835					840					845			
Ala	Leu	Glu	Gln	Asn	Leu	Lys	Asp	Leu	Asp	Lys	Phe	Glu	Glu	Thr	Ile
	850					855					860				
Pro	Glu	Ser	Gln	Val	Lys	Lys	Leu	Lys	Lys	Ile	Asp	Ser	Tyr	Leu	Thr
865					870					875					880
Glu	Asn	Pro	Glu	Arg	Ala	Gly	Lys	Glu	Ile	Asn	Asp	Thr	Glu	Leu	Ser

<210>	212
<211>	3744
<212>	DNA
<213>	SHRIMP

```
<400> 212
atgggcgcgc ctaccaacgc tgattttaca cgcacggtat caggagtagc ttcttctctc 60
tatcttggtta accctggagc tccttccgat agagaaaagt tagttttggc ctcttcttat 120
tctgactctt ttgtgtacaa ctacaaggat gcagtgggtga ccgctgaggc tcccaagtgg 180
tgtcccttta acgagccagc tcttcatgag cacatcatga acagacttga aaaagctgg 240
ctaattaaca gatctggtt ttgtgtgaac cctgtaaat cggctggga agtatgcgga 300
tttcgctatt ctggaggaaq tactccccag aacttaattt tcccqattgq aqcatcaqaq 360
```

ataaattggt	tggtcatact	tagaaatgct	gctcgttttg	gtacagtggc	agcatcggcc	420
aaagacgcca	tcgaacgcat	tcctgatcta	agagaagggtg	gtacaagtaa	acatgtggca	480
aagaatgcaa	tgaggagact	tcgtgtatgg	cgagccttta	actggatagc	ggaagcctcc	540
agatcagcgg	gcatgattcg	ctacgaaccc	tttctcggttg	gctgtgctct	atacgatcac	600
gaggtaaaga	gaaggcaact	aaaagggaagt	tatgagcgaa	atgtactatt	tcttggtgac	660
catttctgta	aagaatcaac	tcttctggct	gatatttcaa	gagggggaag	aagttctgat	720
ttctggacga	tcgttgaagc	tgatcatccg	tacaagaata	gacatgctcg	aacaatcagt	780
aatgaaaacta	atgccatccc	tgaagactct	tctataaact	tggagtggga	ggatgttcta	840
gtaaaaaaac	aacgcgacac	aaatcaagga	gatgattcta	cgttagaaaa	gaccttagaa	900
gctgccatca	aagaacatga	aagcatagga	gaaaaaagga	aaaaacatat	cctagagttt	960
attaaaacat	gtctaacaga	ggagcaacga	gaaatgattt	ttaagggagt	tggaggaaaa	1020
gggaatttgt	ccccggccca	tctaacaaat	ctggccgatg	cgatactggc	taataatgcc	1080
aaagcaggca	tatgggttat	tatgcagagt	cttttaaagc	aaatcaattt	ctctatactc	1140
catttaatatg	ggtacgaagc	tcaacgactt	ttaatgttca	agttgtatat	gcttgcatta	1200
cttgctcttt	ttatatctca	gaggggaatt	ggtgacgtgt	ttctgaatgg	tgtgtttaac	1260
ctagaagtga	tgaagaaaag	agctgcaa	gcaaaaaata	gagacatgg	ttctcgagac	1320
gcctacaaga	acaatactaa	cgagtcta	aatttgggca	attattccca	attcgatata	1380
gctacaattt	atggtcaaat	gtctgattgt	aatgcaattc	ctctatctat	taatattgga	1440
gtacctctcc	ataaactcgag	gatgaacatg	caagacattg	aaaagaccat	acaacacata	1500
tggtatatgg	gtttggcaaa	gatacgtgta	gcggaagaaa	atagagttagc	tagacgtctt	1560
ttacatagaa	gaaaaatgca	agaaaaggca	gccaggaggc	gagcagctgc	gagacagaga	1620
agactaagag	gtgaagaaga	agaagaagaa	gaggaggagg	aggaagagg	agaagaaatg	1680
gaagaagagg	aagaagaagc	tggaaacatca	ggtgttaatg	gttctggtta	tgatcaagaa	1740
gaagaagatg	atggtgagga	ggaggaggag	gaagagggaag	aagaggatga	agaagatagt	1800
gaggggtgaag	atatgaatgg	ggaaaataac	tcaagaaaac	gtaaaaaacac	tggtataact	1860
tcctccactc	aacaacctcc	ccaaaagcgt	cagcgaggta	aaaatgcgcc	catttcaacc	1920
aagggaaaaa	ggttaaagga	aagagataat	attggaggat	ttttattagc	cacaattcaa	1980
aacgatgacc	gccaaagtga	tgtggagagc	atacaaaaac	ttttgacggc	caggcaagaa	2040
aaatatgtta	aaggtggaaa	atgtggagat	aatggactac	cagaattgtt	aattgaaaag	2100
gttacaatc	tactagattc	agtgttccat	ttcagaaagg	ggtctattct	taacagcata	2160
cacgcaata	ggcgatcaga	aactggcgta	tacaccacaa	aggcaaaactg	tatttgtgat	2220
tactctgaaa	gaaacgtatc	aaaagacagt	agtaataata	caccccatctc	atctgaatgt	2280
attgagcggg	caagagaaaag	ggatgcttcc	tgtgccgaat	ctaacaacacg	cccttgctct	2340
gtagactcta	acaaccctga	agatgtggaa	caacgtatgc	gggaattgat	catggaccct	2400
ccttcattat	caggggtaga	agattctctc	gctatcgaaa	gagtacttca	aaatgagata	2460
ttattcacia	gtcttgtcac	caatccaatt	ttcaatgccg	tgttagggtgc	tgaaaaagga	2520
gactctggaa	gatttatcgt	attaaataac	attgtaaaat	ttatgaatat	gactattgct	2580
tgtctagtgg	acggagatat	gcctatgctt	ctagactcaa	gaggcaagac	aaaaaacctt	2640
ctagaaaagg	gtacagtga	aaacacgaga	aaatttttca	aaccaaatat	gactgcagca	2700
gaattgaacg	tggccactgc	tcaatctgca	ggacaccaat	acatgaacgc	tggtcattgt	2760
ccagaacctg	gaatcaagca	aatgttactc	cctgattgta	taatgaaact	gaaatccatc	2820
gccatggaaa	agggtcgagg	aggagatcg	gcccttcaca	gacagaaatg	tgaccatgcc	2880
ttttgcaaga	tgctgaagtg	tttattcttc	aatattgacc	cttcaaatgc	tgcatagata	2940
tttattgacc	ctgcgtcacg	tgccacctta	tttaggcttg	atgatctttg	tagggatagg	3000
aaaaaataca	agaacattga	ctgggtaaag	gatttactag	accctgtaat	gaagggaaca	3060
aataaatggg	tgggaactgg	agaatacact	aacattggac	gtgactcaaa	cgtggccgcc	3120
cctgttgatt	tttacacaat	tttgaaatac	acaatgattg	atgatggtgt	aataagtgtt	3180
ccttcacgga	aaccaaatga	cgtgtattac	agtactattg	aaagagcgga	tgacttactc	3240
accgagagca	gggacgcttc	atgtgaaagc	taccgccga	ccttgtttga	cgccagagcg	3300
gtgttggaag	tcaacggaga	cggacgtgtc	ccttaccctt	ccagtgaaac	cgtagaagac	3360
ttggggaggag	aagaagaaga	agaggaaata	acaggcggtta	ttgacgacag	tactgaaata	3420
gaagacgttc	aagtacagga	cagtaatcta	ttcgatgtgg	aattattcga	tatccctgaa	3480
atagaacaac	atcaacaggg	tggagaagaa	gaggaacttc	cttcagcaat	atctgaagtg	3540
tttgcttcat	taccagctga	taacgattcc	tcctcacccg	cgcatattcc	ctcatttggg	3600
aattctgagg	agggggaaaa	aagtcagaa	ccgtacaata	tttttgattc	tgccctcgac	3660
caattattgg	atttaataga	tagcgatgga	agaaacaata	accctaaaag	agtcgactgg	3720
aacagtgtca	ccattcaaga	atga				3744

&lt;210&gt; 213

&lt;211&gt; 1245

&lt;212&gt; PRT

WO 01/38351

PCT/US00/28888

299

&lt;213&gt; SHRIMP

&lt;400&gt; 213

Met	Gly	Ala	Pro	Thr	Asn	Ala	Asp	Phe	Thr	Arg	Thr	Val	Ser	Gly	Val
1				5					10					15	
Ala	Ser	Ser	Leu	Tyr	Leu	Val	Asn	Pro	Gly	Ala	Pro	Ser	Asp	Arg	Glu
			20					25					30		
Lys	Leu	Val	Leu	Ala	Ser	Ser	Tyr	Ser	Asp	Ser	Phe	Val	Tyr	Asn	Tyr
		35					40					45			
Lys	Asp	Ala	Val	Val	Thr	Ala	Glu	Ala	Pro	Lys	Trp	Cys	Pro	Phe	Asn
	50					55					60				
Glu	Pro	Ala	Leu	His	Glu	His	Ile	Met	Asn	Arg	Leu	Glu	Lys	Ala	Gly
	65				70					75					80
Leu	Ile	Asn	Arg	Ser	Arg	Phe	Val	Cys	Asn	Pro	Val	Lys	Ser	Ala	Gly
				85					90					95	
Glu	Val	Cys	Gly	Phe	Arg	Tyr	Ser	Gly	Gly	Ser	Thr	Pro	Gln	Asn	Leu
			100					105					110		
Ile	Phe	Pro	Ile	Gly	Ala	Ser	Glu	Ile	Asn	Trp	Leu	Val	Ile	Leu	Arg
		115					120					125			
Asn	Ala	Ala	Arg	Phe	Gly	Thr	Val	Ala	Ala	Ser	Ala	Lys	Asp	Ala	Ile
	130					135					140				
Glu	Arg	Ile	Pro	Asp	Leu	Arg	Glu	Gly	Gly	Thr	Ser	Lys	His	Val	Ala
	145				150					155					160
Lys	Asn	Ala	Met	Arg	Arg	Leu	Arg	Val	Trp	Arg	Ala	Phe	Asn	Trp	Ile
				165					170					175	
Ala	Glu	Ala	Ser	Arg	Ser	Ala	Gly	Met	Ile	Arg	Tyr	Glu	Pro	Phe	Ser
			180					185					190		
Val	Gly	Cys	Ala	Leu	Tyr	Asp	His	Glu	Val	Arg	Arg	Arg	Gln	Leu	Lys
		195					200					205			
Gly	Ser	Tyr	Glu	Arg	Asn	Val	Leu	Phe	Leu	Gly	Asp	His	Phe	Cys	Lys
	210					215					220				
Glu	Ser	Thr	Leu	Leu	Ala	Asp	Ile	Ser	Arg	Gly	Gly	Arg	Ser	Ser	Asp
	225				230					235					240
Phe	Trp	Thr	Ile	Val	Glu	Ala	Val	Ile	Arg	Tyr	Lys	Asn	Arg	His	Ala
				245					250					255	
Arg	Thr	Ile	Ser	Asn	Glu	Thr	Asn	Ala	Ile	Pro	Glu	Asp	Ser	Ser	Ile
			260					265					270		
Asn	Leu	Glu	Trp	Glu	Asp	Val	Leu	Val	Lys	Asn	Gln	Arg	Asp	Thr	Asn
		275					280					285			
Gln	Gly	Asp	Asp	Ser	Thr	Leu	Glu	Lys	Thr	Leu	Glu	Ala	Ala	Ile	Lys
		290				295					300				
Glu	His	Glu	Ser	Ile	Gly	Glu	Lys	Arg	Lys	Lys	His	Ile	Phe	Ile	Lys
	305					310				315					320
Thr	Cys	Leu	Thr	Glu	Glu	Gln	Arg	Glu	Met	Ile	Phe	Lys	Gly	Val	Gly
				325					330					335	
Gly	Lys	Gly	Asn	Leu	Ser	Pro	Ala	His	Leu	Thr	Asn	Leu	Ala	Asp	Ala
			340					345					350		
Ile	Leu	Ala	Asn	Asn	Ala	Lys	Ala	Gly	Ile	Trp	Val	Ile	Met	Gln	Ser
		355					360					365			
Leu	Leu	Lys	Gln	Ile	Asn	Phe	Ser	Ile	Leu	His	Leu	Ile	Gly	Tyr	Glu
		370				375					380				
Ala	Gln	Arg	Leu	Leu	Met	Phe	Lys	Leu	Tyr	Met	Pro	Ala	Leu	Leu	Ala
					390					395					400
Leu	Phe	Ile	Ser	Gln	Arg	Gly	Ile	Gly	Asp	Val	Phe	Leu	Asn	Gly	Val
				405					410					415	
Phe	Asn	Leu	Glu	Val	Met	Lys	Glu	Arg	Ala	Ala	Asn	Ala	Lys	Ile	Arg
			420					425					430		
Asp	Met	Val	Ser	Arg	Asp	Ala	Tyr	Lys	Asn	Asn	Thr	Asn	Glu	Ser	Asn
		435					440					445			
Asn	Leu	Gly	Asn	Tyr	Ser	Gln	Phe	Asp	Ile	Ala	Thr	Ile	Tyr	Gly	Gln
	450					455					460				

Met	Ser	Asp	Cys	Asn	Ala	Ile	Pro	Leu	Ser	Ile	Asn	Ile	Gly	Val	Pro
465					470					475					480
Leu	His	Lys	Ser	Arg	Met	Asn	Met	Gln	Asp	Ile	Glu	Lys	Thr	Ile	Gln
				485					490						495
His	Ile	Val	Asp	Met	Gly	Leu	Ala	Lys	Ile	Arg	Val	Ala	Glu	Glu	Asn
			500					505					510		
Arg	Val	Ala	Arg	Arg	Leu	Leu	His	Arg	Arg	Lys	Met	Gln	Glu	Lys	Ala
		515						520				525			
Ala	Arg	Glu	Arg	Ala	Ala	Ala	Arg	Gln	Arg	Arg	Leu	Arg	Gly	Glu	Glu
		530				535					540				
Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gly	Glu	Glu	Met	Glu	Glu
545					550					555					560
Glu	Glu	Glu	Glu	Ala	Gly	Thr	Ser	Gly	Val	Asn	Gly	Ser	Gly	Tyr	Asp
				565					570						575
Gln	Glu	Glu	Glu	Asp	Asp	Gly	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu
				580				585							590
Glu	Asp	Glu	Glu	Asp	Ser	Glu	Gly	Glu	Asp	Met	Asn	Gly	Glu	Asn	Asn
		595					600					605			
Ser	Arg	Lys	Arg	Lys	Asn	Thr	Gly	Asn	Thr	Ser	Ser	Thr	Gln	Gln	Pro
		610					615					620			
Pro	Gln	Lys	Arg	Gln	Arg	Gly	Lys	Asn	Ala	Pro	Ile	Ser	Thr	Lys	Gly
625					630					635					640
Lys	Arg	Leu	Lys	Glu	Arg	Asp	Asn	Ile	Gly	Gly	Phe	Leu	Leu	Ala	Thr
				645					650						655
Ile	Gln	Asn	Asp	Asp	Arg	Gln	Val	Asn	Val	Glu	Ser	Ile	Gln	Lys	Leu
			660					665							670
Leu	Thr	Ala	Arg	Gln	Arg	Lys	Tyr	Val	Lys	Gly	Gly	Lys	Cys	Gly	Asp
		675					680					685			
Asn	Gly	Leu	Pro	Glu	Leu	Leu	Ile	Glu	Lys	Val	Thr	Asn	Leu	Leu	Asp
		690				695					700				
Ser	Val	Phe	His	Phe	Arg	Lys	Gly	Ser	Ile	Leu	Asn	Ser	Ile	His	Ala
705					710					715					720
Asn	Arg	Arg	Ser	Glu	Thr	Gly	Val	Tyr	Thr	Thr	Lys	Ala	Asn	Cys	Ile
				725					730						735
Cys	Asp	Tyr	Tyr	Glu	Arg	Asn	Val	Ser	Lys	Asp	Ser	Ser	Asn	Asn	Thr
			740					745					750		
Pro	His	Ser	Ser	Glu	Cys	Ile	Glu	Arg	Ala	Arg	Glu	Arg	Asp	Ala	Ser
			755				760						765		
Cys	Ala	Glu	Ser	Asn	Lys	Arg	Pro	Cys	Pro	Val	Asp	Ser	Asn	Asn	Pro
				770			775				780				
Glu	Asp	Val	Glu	Gln	Arg	Met	Arg	Glu	Leu	Ile	Met	Asp	Pro	Pro	Ser
785					790					795					800
Leu	Ser	Gly	Val	Glu	Asp	Ser	Leu	Ala	Ile	Glu	Arg	Val	Leu	Gln	Asn
				805					810						815
Glu	Ile	Leu	Phe	Thr	Ser	Leu	Val	Thr	Asn	Pro	Ile	Phe	Asn	Ala	Val
			820					825					830		
Leu	Gly	Ala	Glu	Lys	Gly	Asp	Leu	Gly	Arg	Phe	Ile	Val	Leu	Asn	Asn
		835					840					845			
Ile	Val	Lys	Phe	Met	Asn	Met	Thr	Ile	Ala	Cys	Leu	Val	Asp	Gly	Asp
		850				855					860				
Met	Pro	Met	Leu	Leu	Asp	Ser	Arg	Gly	Lys	Thr	Lys	Asn	Leu	Leu	Glu
865					870					875					880
Lys	Gly	Thr	Val	Lys	Asn	Thr	Arg	Lys	Phe	Phe	Lys	Pro	Asn	Met	Thr
				885					890						895
Ala	Ala	Glu	Leu	Asn	Val	Ala	Thr	Ala	Gln	Ser	Ala	Gly	His	Gln	Tyr
			900					905					910		
Met	Asn	Ala	Gly	His	Cys	Pro	Glu	Pro	Gly	Ile	Lys	Gln	Met	Leu	Leu
		915					920					925			
Pro	Asp	Cys	Ile	Met	Lys	Leu	Lys	Ser	Ile	Ala	Met	Glu	Lys	Gly	Arg
		930				935					940				
Gly	Gly	Arg	Ser	Ala	Leu	His	Arg	Gln	Lys	Cys	Asp	His	Ala	Phe	Cys



945		950		955		960
Lys Met Leu Lys Cys Leu Phe Phe Asn Ile Asp Pro Ser Asn Ala Ala						
	965			970		975
Asp Thr Phe Ile Asp Pro Ala Ser Arg Ala Thr Leu Phe Arg Leu Asp						
	980			985		990
Asp Leu Cys Arg Asp Arg Lys Lys Tyr Lys Asn Ile Asp Trp Val Lys						
	995			1000		1005
Asp Leu Leu Asp Pro Val Met Lys Gly Thr Asn Lys Trp Val Gly Thr						
	1010			1015		1020
Gly Glu Tyr Thr Asn Ile Gly Arg Asp Ser Asn Val Ala Ala Pro Val						
	1025			1030		1035
Asp Phe Tyr Thr Ile Leu Lys Tyr Thr Met Ile Asp Asp Gly Val Ile						
	1045			1050		1055
Ser Val Pro Ser Arg Lys Pro Asn Asp Val Tyr Tyr Ser Thr Ile Glu						
	1060			1065		1070
Arg Ala Asp Asp Leu Leu Thr Glu Ser Arg Asp Ala Ser Cys Glu Ser						
	1075			1080		1085
Tyr Arg Pro Thr Leu Phe Asp Ala Arg Ala Val Leu Glu Val Asn Gly						
	1090			1095		1100
Asp Gly Arg Val Pro Tyr Pro Ser Ser Glu Thr Val Glu Asp Leu Gly						
	1105			1110		1115
Gly Glu Glu Glu Glu Glu Glu Ile Thr Gly Val Ile Asp Asp Ser Thr						
	1125			1130		1135
Glu Ile Glu Asp Val Gln Val Gln Asp Ser Asn Leu Phe Asp Val Glu						
	1140			1145		1150
Leu Phe Asp Ile Pro Glu Ile Glu Gln His Gln Gln Gly Gly Glu Glu						
	1155			1160		1165
Glu Glu Leu Pro Ser Ala Ile Ser Glu Val Phe Ala Ser Leu Pro Ala						
	1170			1175		1180
Asp Asn Asp Ser Ser Ser Pro Ala His Ile Pro Ser Phe Gly Asn Ser						
	1185			1190		1195
Glu Glu Gly Glu Lys Ser Pro Glu Pro Tyr Asn Ile Phe Asp Ser Ala						
	1205			1210		1215
Leu Asp Gln Leu Leu Asp Leu Ile Asp Ser Asp Gly Arg Asn Asn Asn						
	1220			1225		1230
Pro Lys Arg Val Asp Trp Asn Ser Val Thr Ile Gln Glu						
	1235			1240		1245

<210> 214  
 <211> 2946  
 <212> DNA  
 <213> SHRIMP

<400> 214  
 atggaagaaa caataaccct aaaagagtcg actggaacag tgtcaccatt caagaatgaa 60  
 aatattacca gaatagcgtc taattacgtc cgagccttta ctgacacgtg gtctcatttg 120  
 gtcaacattt ctggagctcc tctaactgct gagaagaatc caagcgtat cccagctaac 180  
 gaactgaata gatactggac caaaactaac gtgttatgca acccactctt taaattggag 240  
 gaccacataa cgagggatga agatactggt acaataacac taaaattcaa aatgtatata 300  
 gatgataaaa atggactata tcagtctgcc gttttaatgc tggctctcga ttcgttcgtt 360  
 tcgcttgcat ctttttccca tggagctgat ttggtttcca ataaaagtga aaacaaattc 420  
 tgcgtaaaaa ttccccacga cactcgcgct gaatctttac tgaataatgt tggattcccc 480  
 gctggattaa gtgggccttt taagagatgg agcattaact acaaggctgc aaacttgagc 540  
 ggtaaaagcg gtatagatgg cctttcaggt tccatgttga cagtactaaa aaataacacc 600  
 aataaaagag caactgatat ttacatttg gtgaataatg tttctgcctc tgcacaacaa 660  
 cttgacgatt ctgaaatgtc tcgtactttt aaccacacaa agaaagtgg agtttggtat 720  
 gatataaatg tgtccagttc aaggcaagt aaccagcgta atttactcca ccatcagaat 780  
 ataataggac aacatctgat cgaatttaga accaagcaac ttgaacgcgc acaaaataaa 840  
 aaagtcaagg aagaggaaaa tgggtgagcat gaagaaatga caagtgagga ggaagaagag 900  
 gaagatgaat atgaagaagg aggttgcccta tcagatatgt acgaggaaga tttctatgag 960

```

gatggttacg atgaagaaga gggcgatgac aatagaacta gaaagaagaa gaaaatggaa 1020
gaagatgaag aggatgaaga agaagaatat gacgatgaag aagatgaaga agaggcagaa 1080
acttgtggtg ctaatggtgt tattgattgt gaagacgatg caatcatttt ccccaatgga 1140
caaaattcaa aaaggaagaa aaatggtaaa aaaacaaaca ttaaaaagcg gtcacggagg 1200
aagggggagt gctctgctaa cactttatcc tttgtggaaa aatacgttgg aaattgtaag 1260
agcctaggta taaagccagt aggggtgtccg ccccatcca ctgaatttac ttccctat 1320
atgaagggga gtgaagctga cagctgttat aatacttgtc agtccaccag aggggctagc 1380
cgtataaggt cactactcaa taaatactct gttaaagatt tgatgcaggt aaacagccct 1440
tcgagttgga aatgggctaa ccctcccgac cgacggttcg tgctgtttga taagaaaact 1500
aaggaagaag ttgaggttaa gtttgaaatt gaatgtgaaa aatccgagta ttttgatgtc 1560
gtatctgaac tccctagtaa tattaagta tggttaaaag agacggcaaa aataataaaa 1620
catttggtct tgattgaaga ctttcttcca gctatgggtg ctgctacccc aaaaattccc 1680
ctcaatttga ttaaaactat gacgagcatt ttctctgtta gagatattgt tggatttaaa 1740
ataccagaag aagtgtctag ttttattcct atagaatgga agacatctat ttctgcaatg 1800
gggctcctct ctgtacaatt tgatcgtata atagaagtga tagatttaat gataactaat 1860
ggcgcccttg cgacgtcatg cttgaacaac gcattcttct tggaaagagg agtgggtgcc 1920
agagatggga gtaacacgtg gctccacacg gaccttgtgc aactctccac ctccatattt 1980
agaagtattc gcaacagagg agtgaatatt ggcggttaaca acaacactgg tagcaattct 2040
tctagttctt cttgtggagg gaataagggc gattatggag tacgttggg attgagtata 2100
agcaagcgtg gtataaccct gaaaccacca cctgcagcga tgactaattc ttcttcccgc 2160
tcctcctcgg ccattgatctc attgcctcag cccacgcgcc agagcataga tctttcgata 2220
acgacaatca tccaagattt ctccagaagt tctgggaaat tgaggcttaa tggattacag 2280
aaaaacatgt ctgacaagag caaagacgtg tttaatgatg caatatacga ctctggcgca 2340
ttcaaggcgc tcctaacatg cacagtcaac gataaaaagta gacgtaaaag gaaaagaagg 2400
actttatttg catctggaga ggggtgtggt cgaagaaacc tgatggtgag tcaggggcaat 2460
gacgtcaatg atgccacca gttccaggaa gaatgcggaa taaaaattgg gggcggggct 2520
tctagggtgt ataaaagagc ccagcgccga gggtcggcag tcagttccag aagaagagta 2580
aggaacaaac cccagtttac tatagcagtc tctgacgaag acgacgactg cgaagaagaa 2640
ggcgactttt cttccgagtt aaatccaacg cactctcaac tacttctatt ccaacaacgg 2700
caacaagata gctgcacaga agacgacgac gttttagtgt ctgtagaaga atataacaac 2760
agagtaagcg gttcttccac cacagccgga gacagagttc ttgcaaagga tcttctctct 2820
actgtatctc cgaacgaaaa gaggaactct gccgccctcg ccgactcac catatcccgc 2880
cactctcttt tcaacgctct atctgcaaaa acaaagttgg gagaaaatgg acgtttcttc 2940
ctataa 2946

```

&lt;210&gt; 215

&lt;211&gt; 975

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 215

```

Met Glu Glu Thr Ile Thr Leu Lys Glu Ser Thr Gly Thr Val Ser Pro
1      5      10      15
Phe Lys Asn Glu Asn Ile Thr Arg Ile Asn Tyr Val Arg Ala Phe Thr
20     25     30
Asp Thr Trp Ser His Leu Val Asn Ile Ser Gly Ala Pro Leu Thr Ala
35     40     45
Glu Lys Asn Pro Ser Ala Ile Pro Ala Asn Glu Leu Asn Arg Tyr Trp
50     55     60
Thr Lys Thr Asn Val Leu Cys Asn Pro Leu Phe Lys Leu Glu Asp His
65     70     75     80
Ile Thr Arg Asp Glu Asp Thr Gly Thr Ile Thr Leu Lys Phe Lys Met
85     90     95
Tyr Ile Asp Asp Lys Asn Gly Gln Ser Ala Val Leu Met Leu Ala Leu
100    105    110
Asp Ser Phe Val Ser Leu Ala Ser Phe Ser His Gly Ala Asp Leu Val
115    120    125
Ser Asn Lys Ser Glu Asn Lys Phe Cys Val Lys Ile Pro His Asp Thr
130    135    140
Arg Ala Glu Ser Leu Leu Asn Asn Val Gly Phe Pro Ala Gly Leu Ser
145    150    155    160

```

WO 01/38351

PCT/US00/28888

303

Gly	Pro	Phe	Lys	Arg	Trp	Ser	Ile	Asn	Tyr	Lys	Ala	Ala	Asn	Leu	Ser
				165					170					175	
Gly	Lys	Ser	Gly	Ile	Asp	Gly	Leu	Ser	Gly	Ser	Met	Leu	Thr	Val	Leu
			180					185					190		
Lys	Asn	Asn	Thr	Asn	Lys	Arg	Ala	Thr	Asp	Ile	Leu	His	Leu	Val	Asn
			195				200					205			
Asn	Val	Ser	Ala	Ser	Ala	Gln	Leu	Asp	Asp	Ser	Glu	Met	Ser	Arg	
	210					215				220					
Thr	Phe	Asn	His	Gln	Lys	Lys	Val	Gly	Val	Cys	Tyr	Asp	Ile	Asn	Val
225					230					235				240	
Ser	Ser	Ser	Arg	Gln	Val	Asn	Gln	Arg	Asn	Leu	Leu	His	His	Gln	Asn
				245					250					255	
Ile	Ile	Gly	Gln	His	Leu	Ile	Glu	Phe	Arg	Thr	Lys	Gln	Leu	Glu	Arg
			260					265					270		
Ala	Gln	Asn	Lys	Lys	Val	Lys	Glu	Glu	Glu	Asn	Gly	Glu	His	Glu	Glu
			275				280					285			
Met	Thr	Ser	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Tyr	Glu	Glu	Gly	Gly
	290					295					300				
Cys	Leu	Ser	Asp	Ile	Asp	Glu	Glu	Asp	Phe	Tyr	Glu	Asp	Gly	Tyr	Asp
305					310					315				320	
Glu	Glu	Glu	Gly	Asp	Asp	Asn	Arg	Thr	Arg	Lys	Lys	Lys	Lys	Met	Glu
				325					330					335	
Glu	Asp	Glu	Glu	Asp	Glu	Glu	Glu	Glu	Tyr	Asp	Asp	Glu	Glu	Asp	Glu
			340					345					350		
Glu	Glu	Ala	Glu	Thr	Cys	Gly	Ala	Asn	Gly	Val	Ile	Asp	Cys	Glu	Asp
			355				360					365			
Asp	Ala	Ile	Ile	Phe	Pro	Asn	Gly	Gln	Asn	Ser	Lys	Arg	Lys	Lys	Asn
	370					375					380				
Gly	Lys	Lys	Thr	Asn	Ile	Lys	Lys	Arg	Ser	Arg	Arg	Lys	Gly	Glu	Cys
385					390					395				400	
Ser	Ala	Asn	Thr	Leu	Ser	Phe	Val	Glu	Lys	Tyr	Val	Gly	Asn	Cys	Lys
				405					410					415	
Ser	Leu	Gly	Ile	Lys	Pro	Val	Gly	Cys	Pro	Pro	Pro	Ser	Thr	Glu	Phe
			420					425					430		
Thr	Ser	Leu	Phe	Met	Lys	Gly	Ser	Glu	Ala	Asp	Ser	Cys	Tyr	Asn	Thr
		435				440						445			
Cys	Gln	Ser	Thr	Arg	Gly	Ala	Ser	Arg	Ile	Arg	Ser	Leu	Leu	Asn	Lys
	450					455					460				
Tyr	Ser	Val	Lys	Asp	Leu	Met	Gln	Val	Asn	Ser	Pro	Ser	Ser	Trp	Lys
465					470					475				480	
Trp	Ala	Asn	Pro	Pro	Asp	Arg	Arg	Phe	Val	Leu	Phe	Asp	Lys	Lys	Thr
				485					490					495	
Lys	Glu	Glu	Val	Glu	Val	Lys	Phe	Glu	Ile	Glu	Cys	Glu	Lys	Ser	Glu
			500					505					510		
Tyr	Phe	Asp	Val	Val	Ser	Glu	Leu	Pro	Ser	Asn	Ile	Lys	Val	Trp	Leu
		515					520					525			
Lys	Glu	Thr	Ala	Lys	Ile	Ile	Lys	His	Leu	Ala	Leu	Ile	Glu	Asp	Phe
	530					535					540				
Leu	Pro	Ala	Met	Gly	Ala	Ala	Thr	Pro	Lys	Ile	Pro	Leu	Asn	Leu	Ile
545					550					555				560	
Lys	Thr	Met	Thr	Ser	Ile	Phe	Ser	Val	Arg	Asp	Ile	Val	Gly	Phe	Lys
				565					570					575	
Ile	Pro	Glu	Glu	Val	Leu	Ser	Phe	Ile	Pro	Ile	Glu	Trp	Lys	Thr	Ser
			580					585					590		
Ile	Ser	Ala	Met	Gly	Leu	Leu	Ser	Val	Gln	Phe	Asp	Arg	Ile	Ile	Glu
		595					600					605			
Val	Ile	Asp	Leu	Met	Ile	Thr	Asn	Gly	Ala	Phe	Ala	Thr	Ser	Cys	Leu
	610					615					620				
Asn	Asn	Ala	Phe	Phe	Leu	Glu	Arg	Gly	Val	Val	Pro	Arg	Asp	Gly	Ser
625					630					635				640	
Asn	Thr	Trp	Leu	His	Thr	Asp	Leu	Val	Gln	Leu	Ser	Thr	Ser	Ile	Phe

				645					650					655	
Arg	Ser	Ile	Arg	Asn	Arg	Gly	Val	Asn	Ile	Gly	Gly	Asn	Asn	Asn	Thr
			660					665					670		
Gly	Ser	Asn	Ser	Ser	Ser	Ser	Ser	Cys	Gly	Gly	Asn	Lys	Gly	Asp	Tyr
		675					680					685			
Gly	Val	Arg	Cys	Gly	Leu	Ser	Ile	Ser	Lys	Arg	Gly	Ile	Thr	Leu	Lys
	690					695					700				
Pro	Pro	Pro	Ala	Ala	Met	Thr	Asn	Ser	Ser	Ser	Pro	Ser	Ser	Ser	Ala
705					710					715					720
Met	Ile	Ser	Leu	Pro	Gln	Pro	Thr	Arg	Gln	Ser	Ile	Asp	Leu	Ser	Ile
			725						730						735
Thr	Thr	Ile	Ile	Gln	Asp	Phe	Ser	Glu	Val	Ser	Gly	Lys	Leu	Arg	Leu
			740					745					750		
Asn	Gly	Leu	Gln	Lys	Asn	Met	Ser	Asp	Lys	Ser	Lys	Asp	Val	Phe	Asn
		755					760					765			
Asp	Ala	Ile	Tyr	Asp	Ser	Gly	Ala	Phe	Lys	Ala	Leu	Leu	Thr	Cys	Thr
	770					775					780				
Val	Asn	Asp	Lys	Ser	Arg	Arg	Lys	Arg	Lys	Arg	Arg	Thr	Leu	Leu	Ala
785					790					795					800
Ser	Gly	Glu	Gly	Val	Val	Arg	Arg	Asn	Leu	Met	Val	Ser	Gln	Gly	Asn
			805						810					815	
Asp	Val	Asn	Asp	Ala	His	Gln	Phe	Gln	Glu	Glu	Cys	Gly	Ile	Lys	Ile
			820					825					830		
Gly	Gly	Gly	Ala	Ser	Arg	Val	Tyr	Lys	Arg	Ala	Gln	Arg	Arg	Gly	Ser
			835				840					845			
Ala	Val	Ser	Ser	Arg	Arg	Arg	Val	Arg	Asn	Lys	Pro	Gln	Phe	Thr	Ile
			850			855					860				
Ala	Val	Ser	Asp	Glu	Asp	Asp	Asp	Cys	Glu	Glu	Glu	Gly	Asp	Phe	Ser
865					870					875					880
Ser	Glu	Leu	Asn	Pro	Thr	His	Ser	Gln	Leu	Leu	Leu	Phe	Gln	Gln	Arg
			885						890					895	
Gln	Gln	Asp	Ser	Cys	Thr	Glu	Asp	Asp	Asp	Val	Leu	Val	Ser	Val	Glu
			900					905					910		
Glu	Tyr	Asn	Asn	Arg	Val	Ser	Gly	Ser	Ser	Thr	Thr	Ala	Gly	Asp	Arg
			915				920					925			
Val	Leu	Ala	Lys	Asp	Leu	Leu	Ser	Thr	Val	Ser	Pro	Asn	Glu	Lys	Arg
			930			935					940				
Asn	Ser	Ala	Ala	Ala	Leu	Thr	Ile	Ser	Arg	His	Ser	Leu	Phe	Asn	Ala
945					950					955					960
Leu	Ser	Ala	Lys	Thr	Lys	Leu	Gly	Glu	Asn	Gly	Arg	Phe	Phe	Leu	
			965						970					975	

<210>	216
<211>	2280
<212>	DNA
<213>	SHRIMP

<400>	216					
atgccaccta	aacataaacc	taatactgct	ttaaaaaagc	atataattag	gaaccaacaa	60
cgaaaaaagg	aggatgactc	cgaattccaga	ttccaacgaa	acatgggtca	ggagggtctc	120
caaaattggacg	cgccaacttc	tagtaagaat	aggcaaaagg	gtaagattcg	tactagtataa	180
attctgtcaa	ggagtggcga	ttgtgttgct	ggcgattgtt	cagattttaga	aatgatgag	240
ggaaaaagag	acactgatca	agaaggtggt	ggaagaggag	gaggtaatga	agaagaagag	300
gaagggaagg	aggaaggggg	aggggaggaa	cagcagcggg	aagaaaaagga	agaacagagt	360
gaagagaaaag	aagaaaaaaga	tggagaggag	gaagaagagg	agaattgtga	agacagacat	420
gttacacctta	ctacattctgt	atcgagacgg	gcaaaaacaaa	tgaaaaaagca	catatttctc	480
ccctctaaaa	aaagaaagag	aagtgcacaca	gaatcaaagg	cattagcagt	gcctgctgga	540
aaaatgatga	ccgtgtctcg	accattgaga	ggtgctataa	cttcgggctc	tattttaggt	600
gtaaggagtg	aaaatgcgcc	acaatacgat	tacgtgtcat	acttggcgag	cgaggcagtg	660
gtcaaggaga	aggctataca	qtacagaata	aagctctctt	taqctaacct	tttaaaagcc	720

```

aataaaacca aggccttttcc tacttcatca tctttattgt catctgaaca agggaagaaa 780
aagttcggag gaaaaagaac aaacactttt gttgtcacia atgtgggtgc tgaattggtg 840
aaagctcttc tggctaatag ttgttgggca atttcccata ggaaagatat acggtcagga 900
gagattcagt ggcaagaatt aagttcaaaa atattgaaat ctcttaacga tggaaatgca 960
acagagataa acaattttaat gagcagatc gtggaggatc gtatacagcg aactgtgaaa 1020
gaacgagtat actttgaaca acttgctact gtgtgtaata acctgttttg tacacgtata 1080
ttaccgaaca agaactttga taagaatttt gtatctgtag cttctgataa ctctaaccgc 1140
actgtacgtg gcctatcaat acctcgttat tttagagcta taaataataa cgtgtgggta 1200
aaaatgtcat cgactatgga tcttttggtt ggaggaggga tgaggagtaa atcagagcat 1260
tctatctcca tgctggagaa atgtgcagct ggtgttttag caagagcttc agcaagaccg 1320
gttgaaaaaa tgataaagag tgcagtggag gaaacaagtc aagcatttaa tttatcgact 1380
ggagtgtttg tgcccaaaaca acaacaacag caacgtcagc aacaacaaca acaattttccc 1440
cctttccaac ctctctccctt tcctcttcct ccaccacagg cacctttcca ggttcaacaa 1500
cctacttacc aaggatactt aaatccttat tatcaatata accagtatta taaccatat 1560
gtcctcaaac aattacaaca acagtaccgc ctgtactttt taggcaacca atcacagccg 1620
ccgctcagc tgcagcagca gcagcagcag cagcaaccac cacagccgcc caataatatt 1680
cctctcccc ctactcctca acaacaatca cccagtaata ttctcctcc ccagcagcag 1740
cagcagcagc cctttccggt tcaactcatt tctagtcccc ctctcctcc tcctatacct 1800
aatactgtc ctctccacc tatttcccgt gtaagatttg actctcgttc tactaccct 1860
caacctccac aagaccagt tctaccaag cctactcctc ttctcctcc gtctacagca 1920
agagcagaag aagaaaacgc tactgatag tcctttactg atatagactc tgagcttggc 1980
agtattgatt ttgatcttcc tcccgtact ccaggaggga acgttgaaga gataataaaa 2040
gcgcaacgtc aagctgtcaa ggaaacggga gtcagaggag aagaagaaga agaaggagag 2100
gcattttatt caccaattat tcgtcaaccg cgtacaccag gaaatttttag agatgaactt 2160
ttagatgtca atgaatccat ctatggctca gacattgaac cagcagcagc agcagcagcg 2220
tttgactggg atatgggggtt agacgattta aatgggggatg aaccatatga atttgaataa 2280

```

&lt;210&gt; 217

&lt;211&gt; 757

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 217

```

Met Pro Pro Lys His Lys Pro Asn Thr Ala Leu Lys Lys His Ile Ile
1          5          10          15
Arg Asn Gln Gln Arg Lys Lys Glu Asp Asp Ala Glu Ser Arg Phe Gln
20          25          30
Arg Asn Met Gly Gln Glu Val Ser Lys Leu Asp Ala Pro Thr Ser Ser
35          40          45
Lys Asn Arg Gln Arg Arg Lys Ile Arg Thr Ser Lys Ile Leu Ser Arg
50          55          60
Ser Gly Asp Cys Val Ala Gly Asp Cys Ser Asp Leu Glu Asn Asp Glu
65          70          75          80
Gly Lys Arg Asp Thr Asp Gln Glu Gly Gly Gly Arg Gly Gly Gly Asn
85          90          95
Glu Glu Glu Glu Glu Gly Lys Glu Glu Gly Glu Gly Glu Glu Gln Gln
100          105          110
Arg Glu Glu Lys Glu Glu Gln Ser Glu Glu Lys Glu Glu Lys Asp Gly
115          120          125
Glu Glu Glu Glu Glu Glu Asn Val Glu Asp Glu His Val Thr Pro Thr
130          135          140
Thr Ser Val Ser Lys Arg Ala Lys Gln Met Lys Lys His Ile Phe Pro
145          150          155          160
Pro Ser Lys Lys Arg Lys Arg Ser Asp Thr Glu Ser Lys Ala Val Pro
165          170          175
Ala Gly Lys Met Met Thr Val Ser Arg Pro Leu Arg Gly Ala Ile Thr
180          185          190
Ser Gly Ser Ile Leu Gly Val Arg Ser Glu Asn Ala Pro Gln Tyr Asp
195          200          205
Tyr Val Ser Tyr Leu Ala Asp Glu Ala Val Val Lys Glu Lys Ala Ile

```

210						215					220				
Gln Tyr Arg Ile Arg Ser	Leu Leu Ala Asn Leu	Leu Lys Ala Asn Lys													
225					230				235						240
Thr Lys Ala Phe Pro Thr	Ser Ser Ser Ser Leu	Leu Ser Ser Ser Glu	Gln Gly												
				245				250							255
Lys Lys Lys Phe Gly Gly	Lys Arg Thr Asn Thr	Phe Val Val Thr	Asn												
				260				265							270
Val Gly Ala Glu Leu Val	Lys Ala Leu Leu Ala	Asn Ser Cys Trp	Ala												
				275				280							285
Ile Ser His Arg Lys Asp	Ile Arg Ser Gly Glu	Ile Gln Trp Gln	Glu												
				290				295							300
Leu Ser Ser Lys Ile Leu	Lys Ser Leu Asn Asp	Gly Asn Ala Thr	Glu												320
				305				310							
Ile Asn Asn Leu Met Ser	Ser Ile Val Glu Asp	Arg Ile Gln Arg	Thr												
				325				330							335
Val Lys Glu Arg Val Tyr	Phe Glu Gln Leu Ala	Thr Val Cys Asn	Asn												
				340				345							350
Leu Phe Gly Thr Arg Ile	Leu Pro Asn Lys Asn	Phe Asp Lys Asn	Phe												
				355				360							365
Val Ser Val Ala Ser Asp	Asn Ser Asn Ala Thr	Val Arg Gly Leu	Ser												
				370				375							380
Ile Pro Arg Tyr Phe Arg	Ala Ile Asn Asn Asn	Val Trp Val Lys	Met												
				385				390							395
Ser Ser Thr Met Asp Leu	Leu Val Gly Gly Gly	Met Arg Ser Lys	Ser												
				405				410							415
Glu His Ser Ile Ser Met	Leu Glu Lys Cys Ala	Gly Val Leu Ala													
				420				425							430
Arg Ala Ser Ala Arg Pro	Val Glu Lys Met Ile	Lys Ser Ala Val	Glu												
				435				440							445
Glu Thr Ser Gln Ala Phe	Asn Leu Ser Thr Gly	Val Phe Val Pro	Lys												
				450				455							460
Gln Gln Gln Gln Gln Arg	Gln Gln Gln Gln Gln	Gln Phe Pro Pro	Phe												
				465				470							475
Gln Pro Pro Pro Phe Pro	Leu Pro Pro Pro Gln	Ala Pro Phe Gln	Val												
				485				490							495
Gln Gln Pro Thr Tyr Gln	Gly Tyr Leu Asn Pro	Tyr Tyr Gln Tyr	Asn												
				500				505							510
Gln Tyr Tyr Asn Pro Tyr	Ala Pro Gln Gln Leu	Gln Gln Gln Tyr	Pro												
				515				520							525
Leu Tyr Phe Leu Gly Asn	Gln Ser Gln Pro Pro	Pro Gln Leu Gln	Gln												
				530				535							540
Gln Gln Gln Gln Gln Gln	Pro Pro Gln Pro Pro	Asn Asn Ile Pro	Pro												
				545				550							555
Pro Pro Thr Pro Gln Gln	Ser Pro Ser Asn Ile	Pro Pro Pro Gln	Gln												
				565				570							575
Gln Gln Gln Gln Gln Pro	Phe Pro Val Gln Leu	Ile Ser Ser Pro	Pro												
				580				585							590
Pro Pro Pro Pro Ile Pro	Asn Thr Ala Pro Ser	Pro Pro Ile Ser	Arg												
				595				600							605
Val Arg Phe Asp Ser Arg	Ser Thr Thr Pro Gln	Pro Pro Pro Thr	Pro												
				610				615							620
Val Leu Pro Lys Pro Thr	Pro Leu Pro Pro Pro	Ser Thr Ala Arg	Ala												
				625				630							635
Glu Glu Glu Asn Ala Thr	Asp Met Ser Phe Thr	Asp Ile Asp Ser	Glu												
				645				650							655
Leu Gly Ser Ile Asp Phe	Asp Leu Pro Pro Ala	Thr Pro Gly Arg	Asn												
				660				665							670
Val Glu Glu Ile Ile Lys	Ala Gln Arg Gln Ala	Val Lys Glu Thr	Gly												
				675				680							685
Val Arg Gly Glu Glu Glu	Glu Glu Glu Ala Phe	Ile Ala Pro Ile													
				690				695							700

Ile Arg Gln Pro Arg Thr Pro Gly Asn Phe Arg Asp Glu Leu Leu Asp  
 705 710 715 720  
 Val Asn Glu Ser Ile Tyr Gly Ser Asp Ile Glu Pro Ala Ala Ala Ala  
 725 730 735  
 Ala Ala Phe Asp Trp Asp Met Gly Leu Asp Asp Leu Asn Gly Asp Glu  
 740 745 750  
 Pro Tyr Glu Phe Glu  
 755

<210> 218  
 <211> 3177  
 <212> DNA  
 <213> SHRIMP

<400> 218  
 atggaagggtg taacatccat agttgcagct gctgtcccag aagttgcaat cttgatcacc 60  
 gacctaattgg gaggcagaaa taataagagg tccacctatg aacgaattgt gggatatagt 120  
 ggagaaagtgt gtgatcttct ggaggccata ctggacatct gcaaccgcaa ttcttatagg 180  
 gatgaactttt tggagggaga aacagttgtg attaatccaa ccggtctttt gaaagagata 240  
 tctctatttaa tgaagaaagc cctcgacatg aacatcaaga tgaaaagtaa cgacgacca 300  
 gttccattta caactcttga ccaaacgaa caagaattca ttggacattt aaagagttgc 360  
 aaaaaacaag atgggccagc atacaaggat ctaattcatc gtatttatag tggcatgttt 420  
 gtcataaaaa atacgcgctt gatgttggat gaaattatac gtggaaatgc aggcgatgca 480  
 gtggaggaga agaattgcgtt gtgtgaggcg tacgccgaga tgatatcaga tatggatttg 540  
 atacgcattt tcttactcct tgttgccatc aaacgagatc agaacaagaa gcaccgccac 600  
 atgaaaagtgt tcatttatga agatgtggta gtttctctca acactttgaa ggatgtgttt 660  
 cataaggagt ggtacatgtg gcccttctct gctttgcaag tggggacaaa aataagagac 720  
 gctagaacgt ttagtggttt atttggttct gatatgcatg aaggaaagaa caatgacagg 780  
 atttgggaaa atatggcctt ctccgtaaca gaagcatttt taagtgtgcc atccaccaac 840  
 aaccactaca ataagggtca tcttcgcatg tacgtgcca ggcccggtga tgacgctatg 900  
 gaatatgtgc cccaagaatt acaccatatt ctttttgaa caaaaatagc caagatgatt 960  
 gatatagtgt acagatactc tatctacaat gttccctatc ttttggcagc agatactgaa 1020  
 agagtagagg agccaaagaa atccgtaatg tcgccttctg gtctaataat ctccccgaac 1080  
 gcttcgctct tagaaaatac accactgtcc ctggtatcta gacacggcat accttcagcc 1140  
 agaaaactag gatctttcat cctcgaacat gaaaacgctg aaaatatgca tctagaagaa 1200  
 gcaatcgcca atatgcattg tagccagaca ctgcaagaag agtcttgggg agaaagtcaa 1260  
 gcggcgatgg tgtaccaacc atctgacgaa gtggaggtaa tacaagcaca cgttacaag 1320  
 atattgagtg ggaataccac caataaaaca tgtgggttgt gctacgcgga tttggacatg 1380  
 aaacccaaat tcttcaactg ttctcatgaa aacatgaaag cctcttacga ttatttcccc 1440  
 gtacatgctt tcatggacac ttttgaagca cgacaagaaa cgtgttctgc aaaactatgc 1500  
 cctgattgta ctataaaaca cctaattgat gtgtacgaaa aggtctcggc tggtagtgaa 1560  
 aaactaaagg acgttttttag gtgcccattg tgtggagaat atatggtaca gtttataggt 1620  
 agatgtcacg aattttcatc tttattcgag agggcgattt tagcaggaga aaatgtcgac 1680  
 ccagaataca ttgcagccaa caaacttctc atcaccgaac tcatcaagcg agcagagaaa 1740  
 tgcttctata ctgtggaact tcttcaggcc gaattcatgg agatgtgtaa gatggacaag 1800  
 gactttgcac tagacaagga ttcaaaattt actgtgtgtg ataatagatt cagaccgccc 1860  
 gttaaactct ttaagatggg ggaggagaa actggtgata gcaaatgttc cctgatctgt 1920  
 acccagtggt tactacccaa tgtatgtgac cagcctaatt agatggaaga cattgtaaca 1980  
 gtggatgtac ctccctccagt attgccgtac cctcctcccg aacaactgga agactattac 2040  
 ttccaggatg tagaagatgc tgaatttgat gaccctccca ccgatgagct agtaagatat 2100  
 gatactggtc ccggactcca taaatggccc atgagattgt cctgcggttt cttggcgctca 2160  
 aattttgtac ctccaaatga agaggtgaca aattgtaggc aggcgtgttc tatactaaaa 2220  
 agaactcccg aaaagaagat tcgaggatgg aaccagagat ctccggaggg caaggttctt 2280  
 ctagcgctag ccaactggca ctcgactgat cgtatgccag agaatatgaa ggggcttctc 2340  
 aacgacatat ctgtaattca caacaccagg gagaggtttc agaatagggt taaagttcat 2400  
 tacttaaaaca gtgttttttg gggttttgat gatagagatt ttgaacaagt tgtaggtgtg 2460  
 agtataacct taattgcaac ctatttttat gtctatgaaa aattgaacca tgagagtgca 2520  
 ttaggattat gggcgaaaat gtttgtcaag aatcttatag gggaaatggg gttggagcgg 2580  
 ccagaatgtg tgttccatag agcccattct tttgtccttc attgtgtaga taggcgtgcc 2640  
 ttatcggtga tcagacctaa ccaaggtgca aaaatggaaa ttgttaaaca ggtaaatatt 2700

```

gtacgtcaaa acatgacatc tgaatcaata aaggatccag tgttcactgt ggatgaaaag 2760
aggacattag aatggaaggt tgagaaagaa ggacaggaaa ttaagactgt aaaatgccct 2820
aaatgtaaga cacctaacat aaaattaggt ggatgtatta ccatgacttg ttatgattgt 2880
agcggtagaa gagatgggta ccctacagtt ttttgttgga tatgtgaaga tgaaataact 2940
aaccctgacc atatactaata tgaccataaa ctattgtatt ctgattgtaa gtctacaaag 3000
gctgcttttag aaaaggtgta taattgtact ctatgttgtc tagctttaag aaaatgtagt 3060
gatagttatt tgtccaaaca aagaggagga ggagaagaag aagagattga gatatatgta 3120
atggaagatg gttttgaatt tgatgtacat actaaaacag cggtgcctac aaaataa 3177

```

&lt;210&gt; 219

&lt;211&gt; 1050

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 219

```

Met Glu Gly Val Thr Ser Ile Val Ala Ala Ala Val Pro Glu Val Ala
 1          5          10          15
Ile Leu Ile Thr Asp Leu Met Gly Gly Arg Asn Asn Lys Arg Ser Thr
          20          25          30
Tyr Glu Arg Ile Val Gly Ile Val Gly Glu Ser Gly Asp Leu Leu Glu
          35          40          45
Ala Ile Leu Asp Ile Cys Asn Arg Asn Ser Tyr Arg Asp Glu Leu Leu
          50          55          60
Glu Gly Glu Thr Val Val Ile Asn Pro Thr Gly Leu Leu Lys Glu Ile
65          70          75          80
Ser Leu Leu Met Lys Lys Ala Leu Asp Met Asn Ile Lys Met Lys Ser
          85          90          95
Asn Asp Asp Pro Val Pro Phe Thr Thr Leu Asp Gln Asn Glu Gln Glu
          100          105          110
Phe Ile Gly His Leu Lys Ser Cys Lys Lys Gln Asp Gly Pro Ala Tyr
          115          120          125
Lys Asp Leu Ile His Arg Ile Tyr Ser Gly Met Phe Val Met Lys Asn
          130          135          140
Thr Arg Leu Met Leu Asp Glu Ile Ile Arg Gly Asn Ala Gly Asp Ala
          145          150          155          160
Val Glu Glu Lys Asn Ala Leu Cys Glu Ala Tyr Ala Glu Met Ile Ser
          165          170          175
Asp Met Asp Leu Ile Arg Ile Phe Leu Leu Val Ala Ile Lys Arg
          180          185          190
Asp Gln Asn Lys Lys His Arg His Met Lys Ser Val Ile Tyr Glu Asp
          195          200          205
Val Val Val Ser Leu Asn Thr Leu Lys Asp Val Phe His Lys Glu Trp
          210          215          220
Tyr Met Trp Pro Phe Ser Ala Leu Gln Val Gly Thr Lys Ile Arg Asp
          225          230          235          240
Ala Arg Thr Phe Ser Val Leu Phe Gly Ser Asp Met His Glu Gly Arg
          245          250          255
Asn Asn Asp Arg Ile Trp Glu Asn Met Ala Phe Ser Val Thr Glu Ala
          260          265          270
Phe Leu Ser Gly Pro Ser Thr Asn Asn His Tyr Asn Lys Gly His Leu
          275          280          285
Arg Met Tyr Ala Ala Arg Pro Val Tyr Asp Ala Met Glu Tyr Val Pro
          290          295          300
Gln Glu Leu His His Ile Leu Phe Gly Thr Lys Ile Ala Lys Met Ile
          305          310          315          320
Asp Ile Val Tyr Arg Tyr Ser Ile Tyr Asn Val Pro Tyr Leu Leu Ala
          325          330          335
Ala Asp Thr Glu Arg Val Glu Glu Pro Lys Lys Ser Val Met Ser Pro
          340          345          350
Ser Gly Leu Ile Ile Ser Pro Asn Ala Ser Leu Leu Glu Asn Thr Pro
          355          360          365

```



Leu	Ser	Leu	Val	Ser	Arg	His	Gly	Ile	Pro	Ser	Ala	Arg	Lys	Leu	Gly
370						375					380				
Ser	Phe	Ile	His	Glu	Asn	Ala	Glu	Asn	Met	His	Leu	Glu	Glu	Ala	Ile
385					390					395					400
Ala	Lys	Cys	Met	Val	Ser	Gln	Thr	Leu	Gln	Glu	Glu	Ser	Trp	Gly	Glu
				405					410					415	
Ser	Gln	Ala	Ala	Met	Val	Tyr	Gln	Pro	Ser	Asp	Glu	Val	Glu	Val	Ile
			420					425					430		
Gln	Ala	His	Val	Thr	Lys	Ile	Leu	Ser	Gly	Asn	Thr	Thr	Asn	Lys	Thr
		435					440					445			
Cys	Gly	Leu	Cys	Tyr	Ala	Asp	Leu	Asp	Met	Lys	Pro	Lys	Phe	Phe	Asn
450						455				460					
Cys	Ser	His	Glu	Asn	Met	Lys	Ala	Ser	Tyr	Asp	Tyr	Phe	Pro	Val	His
465					470					475					480
Ala	Phe	Met	Asp	Thr	Phe	Glu	Ala	Arg	Gln	Glu	Thr	Cys	Ser	Ala	Lys
				485					490					495	
Leu	Cys	Pro	Asp	Cys	Thr	Ile	Lys	His	Leu	Met	Tyr	Val	Tyr	Glu	Lys
			500					505					510		
Val	Ser	Ala	Gly	Ser	Glu	Lys	Leu	Lys	Asp	Val	Phe	Arg	Cys	Pro	Cys
		515					520					525			
Cys	Gly	Glu	Tyr	Met	Val	Gln	Phe	Ile	Gly	Arg	Cys	His	Glu	Phe	Ser
530						535					540				
Ser	Leu	Phe	Glu	Arg	Ala	Ile	Leu	Ala	Gly	Glu	Asn	Val	Asp	Pro	Glu
545					550					555					560
Tyr	Ile	Ala	Ala	Asn	Lys	Leu	Leu	Ile	Thr	Glu	Leu	Ile	Lys	Arg	Ala
				565						570				575	
Glu	Lys	Cys	Phe	Tyr	Thr	Val	Glu	Leu	Leu	Gln	Ala	Glu	Phe	Met	Glu
			580					585					590		
Met	Cys	Lys	Met	Asp	Lys	Asp	Phe	Ala	Leu	Asp	Lys	Asp	Ser	Lys	Phe
		595					600					605			
Thr	Val	Val	Asp	Asn	Arg	Phe	Arg	Pro	Pro	Val	Lys	Leu	Phe	Lys	Met
		610				615					620				
Val	Glu	Gly	Glu	Thr	Gly	Asp	Ser	Lys	Cys	Ser	Leu	Ile	Cys	Thr	Gln
625					630					635					640
Cys	Leu	Leu	Pro	Asn	Val	Cys	Asp	Gln	Pro	Asn	Glu	Met	Glu	Asp	Ile
				645					650					655	
Val	Thr	Val	Asp	Val	Pro	Pro	Pro	Val	Leu	Pro	Tyr	Pro	Pro	Pro	Glu
			660					665					670		
Gln	Leu	Glu	Asp	Tyr	Tyr	Phe	Gln	Asp	Val	Glu	Asp	Ala	Glu	Phe	Asp
		675					680					685			
Asp	Pro	Pro	Thr	Asp	Glu	Leu	Val	Arg	Tyr	Asp	Thr	Gly	Pro	Gly	Leu
		690				695					700				
His	Lys	Trp	Pro	Met	Arg	Leu	Ser	Cys	Gly	Phe	Leu	Asn	Phe	Val	Pro
705					710					715					720
Pro	Asn	Glu	Glu	Val	Thr	Asn	Cys	Arg	Gln	Ala	Val	Ser	Ile	Leu	Lys
				725					730					735	
Arg	Thr	Pro	Glu	Lys	Lys	Ile	Arg	Gly	Trp	Asn	Pro	Glu	Ser	Pro	Glu
			740					745					750		
Gly	Lys	Val	Leu	Leu	Ala	Asn	Trp	His	Ser	Thr	Asp	Arg	Met	Pro	Glu
		755					760					765			
Asn	Met	Lys	Gly	Leu	Leu	Asn	Asp	Ile	Ser	Val	Ile	His	Asn	Thr	Arg
		770				775					780				
Glu	Arg	Phe	Gln	Asn	Arg	Val	Lys	Val	His	Tyr	Leu	Asn	Ser	Val	Phe
785					790					795					800
Gly	Gly	Phe	Asp	Asp	Arg	Asp	Phe	Glu	Gln	Val	Val	Gly	Val	Ser	Ile
				805					810					815	
Pro	Leu	Ile	Ala	Thr	Tyr	Phe	Tyr	Val	Tyr	Glu	Lys	Leu	Asn	His	Glu
			820					825					830		
Ser	Ala	Leu	Gly	Leu	Trp	Ala	Lys	Met	Phe	Val	Lys	Asn	Leu	Ile	Gly
		835					840					845			
Glu	Met	Val	Leu	Glu	Arg	Pro	Glu	Cys	Val	Phe	His	Arg	Ala	His	Ser

850		855		860	
Phe Val Leu His Cys Val Asp Arg Arg Ala Leu Ser Gly Ile Arg Pro					
865		870		875	880
Asn Gln Gly Ala Lys Met Glu Ile Val Lys Gln Val Asn Ile Val Arg					
	885		890		895
Gln Asn Met Thr Ser Glu Ser Ile Lys Asp Pro Val Phe Thr Val Asp					
	900		905		910
Glu Lys Arg Thr Leu Glu Trp Lys Val Glu Lys Glu Gly Gln Glu Ile					
	915		920		925
Lys Thr Val Lys Cys Pro Lys Cys Lys Thr Pro Asn Ile Lys Leu Gly					
	930		935		940
Gly Cys Ile Thr Met Thr Cys Tyr Asp Cys Ser Gly Arg Arg Asp Gly					
	945		950		955
Tyr Pro Thr Val Phe Cys Trp Ile Cys Glu Asp Glu Ile Thr Asn Pro					
	965		970		975
Asp His Ile Leu Ile Asp His Lys Leu Lys Asp Cys Lys Ser Thr Lys					
	980		985		990
Ala Ala Leu Glu Lys Val Tyr Asn Cys Thr Leu Cys Cys Leu Ala Leu					
	995		1000		1005
Arg Lys Cys Ser Asp Ser Tyr Leu Ser Lys Gln Arg Gly Gly Glu					
	1010		1015		1020
Glu Glu Glu Ile Glu Ile Tyr Val Met Glu Asp Gly Phe Glu Phe Asp					
	1025		1030		1035
Val His Thr Lys Thr Ala Val Pro Thr Lys					1040
	1045		1050		

<210> 220  
 <211> 2547  
 <212> DNA  
 <213> SHRIMP

<400> 220  
 atgggttcta accagcaaca atcattcatc tcaaagagga atggcactaa gcaagaaatt 60  
 agtcttgaaa agataatcaa gaggattgaa aatgcctgtc ttccagtcaa ccagtatgtg 120  
 cccaagcttg acaagaacgc aattaaccct caagaacttg catctcacat catggaccgt 180  
 cttcccgccta ccatctcctt ccaagaaatg gacgattttc tggccgatta tgcaaagaca 240  
 aaaattgttg accaccctga ttttggaaaa ctggcaggaa gattcatctg ttcgaacatc 300  
 cacaaaaaca ccaaagagtg gaatagtttt agtgcaacaa ctcagaaatt gaggcacgca 360  
 atccaccctg gaactggtta accagcatca gtagttaatg atacctacta tgaaaatgtt 420  
 atggccaatg ctgaaattct cgatgctgtt atcgattaca aaatggatta tctcttcacc 480  
 tgtttcggac tgaggacgct agaatactct tatttgatca agattggttc cccactgat 540  
 agaaagaaga gaatcttggt tgagcgccct caggacatga ttatgcgtgt ggctgtcggc 600  
 attcacggat cagacatcaa atctgtcatt gaaacatatg atctcatgtc gaggcactat 660  
 tttacccatg ctccccccac actgtttaat tgtggaacag tcacacccca actttcctcg 720  
 tgcttccttc tgggccttca agatgatagc attgagggtta tttatgatac tcttaaggag 780  
 gcggcaatca tctccaagac tgctggagga ctccggcatcc actttcatga tttgagggca 840  
 aaaggaagcc ccatttcgtc atggagtggg acccaccctg gtctcatggc gttcctccaa 900  
 atctttaacg tctctgtgaa aaaggtttagc caggaggagg acaagaggag aggagctgca 960  
 gccatctata tttctgattg gcatctggac gtgaaggact ttattgactg cagaaagaat 1020  
 gccggtaatg aagatttgag gacgagggat cttttccag ctatctgggt atctgatctc 1080  
 ttcatggaga gagtgaaggc tgggaagaat tgggtccctga tgtgccccca cgagtgcctt 1140  
 ggcctttccg acgtccatgg cgaagagttt aaggcgttgt acgagaaata tgaggctgaa 1200  
 ggcaaaggta aagaggtggt gaaggcacgt gcattattcg accaaattaa ttctgcacgt 1260  
 atcgaaactg gaacacctta tgtgtgcttt aaggatacca tcaatagaaa gtctaaccaa 1320  
 gaaaatgtcg gcatcatcaa gtcttcaaat ttgtgactg aaattgtcca gtacagtgat 1380  
 tcggaggaaa ctgcagtgtg caatttggct tctatcgag tcaacaagtt tgtgaagtat 1440  
 tctcccatcc cttccctaag gccctatgtt gattaccggg agatgaagag ggttgtaaaa 1500  
 atcatgacca gaaatctcga caaggtgatt gatgtcaatt tctatgcagt tgacaagacc 1560  
 cgcatttcca atatgaaaac taggccaatg ggattgggtg tgcaggggact agcagatttg 1620  
 ttcttcaaac tcagaatccc cttcgaatct gaagaagcgg cactaattaa caagaggatt 1680

```

tttgaaacta tatactatgg tgccttggaa gcttcattgt aaattgccaa agaaaagggg 1740
gaaacatatg agctgtttga gggtagtcct ttgagcaaag ggattttcca atttgacatg 1800
gggaaggaaa atattaagaa tagggacata tatttcaact ctttgccaat tcacgattgg 1860
gagcaattga gaagggacat tatgaagtat ggtgttcaca attcaatggt tgttgctccc 1920
atgcctactg catccactgc acagatcctg ggcaactctg aatcctttga gcctttaacg 1980
tccaacatgt ataatcgtaa tgtactttca ggatcattcc aagtgggtgaa cgaatatgtg 2040
attagagagc tcataaaact gggagaatgg aattcagtaa ctaaacagag gattatggca 2100
agtgggtgat ctattcagac gcttccta atccctaaat cgaccaagga actattcaaa 2160
actgtatggg aaattaatcc tctactact ttggacatgg ctattcagag aggtatgttt 2220
gttgaccaag ctcaatccct caacttgttt gtggaagaac ccgaactcag caaggtgcgg 2280
tcaatgacta tgtatgcatg ggagaagggg atcaagactc tctattatct acgcacaaag 2340
ggcgagccta gagctgtcca gttcacagtc gacaagaatg tactccaaga agtcaagaag 2400
gaagctccct ctccctgttg agctttttct gctcctgtcc gagaagaaga agaggagaag 2460
aagtcctcta ttgttgttcc agatcctgct gctgctcttt tatgttctat caataacct 2520
ggtgcttgtg aaatgtgttc ttcctag 2547

```

&lt;210&gt; 221

&lt;211&gt; 842

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 221

```

Met Gly Ser Asn Gln Gln Gln Ser Phe Ile Ser Lys Arg Asn Gly Thr
 1          5          10          15
Lys Gln Glu Ile Ser Leu Glu Lys Ile Ile Lys Arg Ile Glu Asn Ala
          20          25          30
Cys Leu Pro Val Asn Gln Tyr Val Pro Lys Leu Asp Lys Asn Ala Ile
          35          40          45
Asn Pro Gln Glu Leu Ala Ser His Ile Met Asp Arg Leu Pro Ala Thr
          50          55          60
Ile Ser Phe Gln Glu Met Asp Asp Phe Leu Ala Asp Tyr Ala Lys Thr
          65          70          75          80
Lys Ile Val Asp His Pro Asp Phe Gly Lys Leu Ala Gly Arg Phe Ile
          85          90          95
Cys Ser Asn Ile His Lys Asn Thr Lys Glu Trp Asn Ser Phe Ser Ala
          100          105          110
Thr Thr Gln Lys Leu Arg His Ala Ile His Pro Gly Thr Gly Lys Pro
          115          120          125
Ala Ser Val Val Asn Asp Thr Tyr Tyr Glu Asn Val Met Ala Asn Ala
          130          135          140
Glu Ile Leu Asp Ala Val Ile Asp Tyr Lys Met Asp Tyr Leu Phe Thr
          145          150          155          160
Cys Phe Gly Leu Arg Thr Leu Glu Tyr Ser Tyr Leu Ile Lys Ile Gly
          165          170          175
Ser Pro Thr Asp Arg Lys Lys Arg Ile Leu Val Glu Arg Pro Gln Asp
          180          185          190
Met Ile Met Arg Val Ala Val Gly Ile His Gly Ser Asp Ile Lys Ser
          195          200          205
Val Ile Glu Thr Tyr Asp Leu Met Ser Arg His Tyr Phe Thr His Asp
          210          215          220
Thr Leu Phe Asn Cys Gly Thr Val Thr Pro Gln Leu Ser Ser Cys Phe
          225          230          235          240
Leu Leu Gly Leu Gln Asp Asp Ser Ile Glu Gly Ile Tyr Asp Thr Leu
          245          250          255
Lys Glu Ala Ala Ile Ile Ser Lys Thr Ala Gly Gly Leu Gly Ile His
          260          265          270
Phe His Asp Leu Arg Ala Lys Gly Ser Pro Ile Ser Ser Trp Ser Gly
          275          280          285
Thr His Pro Gly Leu Met Ala Phe Leu Gln Ile Phe Asn Val Ser Val
          290          295          300
Lys Lys Val Ser Gln Gly Gly Asp Lys Arg Arg Gly Ala Ala Ala Ile

```

305					310					315				320
Tyr	Ile	Ser	Asp	Trp	His	Leu	Asp	Val	Lys	Asp	Phe	Ile	Asp	Cys
				325					330					335
Lys	Asn	Ala	Gly	Asn	Glu	Asp	Leu	Arg	Thr	Arg	Asp	Leu	Phe	Pro
			340					345					350	
Ile	Trp	Val	Ser	Asp	Leu	Phe	Met	Glu	Arg	Val	Lys	Ala	Gly	Lys
		355					360					365		Asn
Trp	Ser	Leu	Met	Cys	Phe	Cys	Pro	Gly	Leu	Ser	Asp	Val	His	Gly
	370					375					380			Glu
Glu	Phe	Lys	Ala	Leu	Tyr	Glu	Lys	Tyr	Glu	Ala	Glu	Gly	Lys	Gly
385					390					395				400
Glu	Val	Val	Lys	Ala	Arg	Ala	Leu	Phe	Asp	Gln	Ile	Asn	Ser	Ala
				405					410					415
Ile	Glu	Thr	Gly	Thr	Pro	Tyr	Val	Cys	Phe	Lys	Asp	Thr	Ile	Asn
			420					425					430	Arg
Lys	Ser	Asn	Gln	Glu	Asn	Val	Gly	Ile	Ile	Lys	Ser	Ser	Asn	Leu
		435					440					445		Cys
Thr	Glu	Ile	Val	Gln	Tyr	Ser	Asp	Ser	Glu	Glu	Thr	Ala	Val	Cys
	450					455					460			Asn
Leu	Ala	Ser	Ile	Ala	Val	Asn	Lys	Phe	Val	Lys	Tyr	Ser	Pro	Ile
465					470					475				480
Ser	Leu	Arg	Pro	Tyr	Val	Asp	Tyr	Arg	Glu	Met	Lys	Arg	Val	Val
				485					490					495
Ile	Met	Thr	Arg	Asn	Leu	Asp	Lys	Val	Ile	Asp	Val	Asn	Phe	Tyr
			500					505					510	Ala
Val	Asp	Lys	Thr	Arg	Ile	Ser	Asn	Met	Lys	Trp	Met	Gly	Leu	Gly
		515					520					525		Val
Gln	Gly	Leu	Ala	Asp	Leu	Phe	Phe	Lys	Leu	Arg	Ile	Pro	Phe	Glu
	530					535					540			Ser
Glu	Glu	Ala	Ala	Leu	Ile	Asn	Lys	Arg	Ile	Phe	Glu	Thr	Ile	Tyr
545					550					555				560
Gly	Ala	Leu	Glu	Ala	Ser	Cys	Glu	Ile	Ala	Lys	Glu	Lys	Gly	Glu
				565					570					575
Tyr	Glu	Leu	Phe	Glu	Gly	Ser	Pro	Leu	Ser	Lys	Gly	Ile	Phe	Gln
			580					585					590	Phe
Asp	Met	Gly	Lys	Glu	Asn	Ile	Lys	Asn	Arg	Asp	Ile	Tyr	Phe	Asn
		595					600					605		Ser
Leu	Pro	Ile	His	Asp	Trp	Glu	Gln	Leu	Arg	Arg	Asp	Ile	Met	Lys
	610					615					620			Tyr
Gly	Val	His	Asn	Ser	Met	Phe	Val	Ala	Pro	Met	Pro	Thr	Ala	Ser
625					630					635				640
Ala	Gln	Ile	Leu	Gly	Asn	Ser	Glu	Ser	Phe	Glu	Pro	Leu	Thr	Ser
				645					650					655
Met	Tyr	Asn	Arg	Asn	Val	Leu	Ser	Gly	Ser	Phe	Gln	Val	Val	Asn
			660					665				670		Glu
Tyr	Val	Ile	Arg	Glu	Leu	Ile	Lys	Leu	Gly	Glu	Trp	Asn	Ser	Val
		675					680					685		Thr
Lys	Gln	Arg	Ile	Met	Ala	Ser	Gly	Gly	Ser	Ile	Gln	Thr	Leu	Pro
	690					695					700			Asn
Ile	Pro	Lys	Ser	Thr	Lys	Glu	Leu	Phe	Lys	Thr	Val	Trp	Glu	Ile
705					710					715				720
Pro	Arg	Thr	Thr	Leu	Asp	Met	Ala	Ile	Gln	Arg	Gly	Met	Phe	Val
				725					730					735
Gln	Ala	Gln	Ser	Leu	Asn	Leu	Phe	Val	Glu	Glu	Pro	Glu	Leu	Ser
			740					745					750	Lys
Val	Arg	Ser	Met	Thr	Met	Tyr	Ala	Trp	Glu	Lys	Gly	Ile	Lys	Thr
		755					760					765		Leu
Tyr	Tyr	Leu	Arg	Thr	Lys	Gly	Ala	Ala	Arg	Ala	Val	Gln	Phe	Thr
	770					775					780			Val
Asp	Lys	Asn	Val	Leu	Gln	Glu	Val	Lys	Lys	Glu	Ala	Pro	Ser	Pro
785					790					795				800

Ala	Ala	Phe	Ser	Ala	Pro	Val	Arg	Glu	Glu	Glu	Glu	Glu	Lys	Lys	Ser
				805					810					815	
Ser	Ile	Val	Val	Pro	Asp	Pro	Ala	Ala	Ala	Leu	Leu	Cys	Ser	Ile	Asn
			820					825					830		
Asn	Pro	Gly	Ala	Cys	Glu	Met	Cys	Ser	Ser						
		835					840								

<210>	222
<211>	222
<212>	DNA
<213>	SHRIMP

```
<400> 222
atggtcatatc gactctgctt cttggaaagt atcacgtgct ttgtatatgg catcatggca 60
ccactatctt tggacacaaa taccgattat ttatccaca aaaaggatac taataaaaaa 120
atacatagatgc agataaaactt tattccttat tcaaatatgc acgtatatat agcagggtgtg 180
tacacatttc atgaaaaaaa ggggttaaca tatcaacaat at                                     222
```

```
<210> 223
<211> 74
<212> PRT
<213> SHRIMP
```

[illegible]

<210>	224
<211>	1848
<212>	DNA
<213>	SHRIMP

<400> 224						
atggaataca	ttggagagaa	aaacaataac	cctgttagta	atgaaagtgt	atcagaaaag	60
gagttaaaac	taagatcgtc	attcctgatg	atcgggaaga	aaacaagtaa	atatgagcaa	120
gtcatgggtg	tttatgaagc	tatcgaatct	ataagacaaa	gcgaattgtc	cgaagacaca	180
tttgttgtac	atgtgaagaa	agataaaca	ctcaaattcg	caagagggtt	aaaaagatta	240
caagaattgg	tagaagatga	ctctttaaga	attgacacga	taagtgtgtc	ccctcctgaa	300
cctggacatt	tattcaaaga	tgatgctggg	cacgttactg	acgaggaatg	gcttgcaacg	360
caagaagaag	acgtgcgtaa	aatcaataca	atagtcaagg	aaaaattaaa	acgaaaagac	420
aaggacttta	aattcagtca	attatacagg	tacatgagca	atagtctttc	tgaagcagta	480
gaaaaaaaaa	acgattgtat	gataataagt	tccgatttct	taatcggttt	aggtttcagt	540
acaatgaacg	tcacgcacgc	tttaaagtca	atggagagaa	ctatgcagaa	acatgggttc	600
aaggatatga	tggtcctcatt	ggttgaaatt	tgtcaccgta	ccattacaaa	aggagatat	660
atagccaatc	ctattttcaa	gagccattct	tcacatttgc	tgattgttcc	cttgtttatg	720
gtggcgggcg	tttttgcaag	gagcgcacac	ccttctgctg	caagcattga	aatgtacctt	780
tcgacactag	cctacgctgt	tatcttatac	agtgatgaaa	agcaacgcca	gatacgcgaa	840
gagttggcta	ggaaaaattt	acaaataaaa	gaggaactag	aaaaccaggt	cgaaaagacc	900
acaaaagctg	aaaaggaact	agaaacacaa	gtagttaaga	ccacaaaagt	tgaaaaggaa	960
ctagaagaac	aagttagtaa	gaaagaggag	tacataaaact	cgtatatcga	aactgaacaa	1020
cttttcaaag	tctctgagga	acaaaaagaa	tctctcagaa	atgtacacaa	qaaatcttcc	1080

WO 01/38351

PCT/US00/28888

314

```

aatgcgacct tcagatacga cagcggctct tgtctcgtct tctcgatatc ctctacagaa 1140
ttctacttgt tgtgcaggac agacaaaagt gggttcctttg aaactgcaac agaaaatggt 1200
ttgaggtaca ttttctcccc cataaacaag aaaagggata ctgcaggtat gaggccaga 1260
ctcatcatgg ccgtgactgg ctgtgacgca cctatcgctt gcaacgacag tatcaaacac 1320
caaaacaagt tcaaggtatt aaaatgtaac cgatcaagta tagttttcca gaccctcca 1380
agtgatgaag atttgaaggg tattgtacaa aaagtgcacag gttctgatat ccgaatcttt 1440
atgaatgatg gcaccgtcta tcaagatggg cagaggatag acatctcttc gcctcaagaa 1500
cttgatgaag aaaatatgac ccaatttgaa attgaacaac aaaggaagct ccattccatg 1560
atggagaaca catcaaaaat tgtcactagg tacaacaagg aaagacattt gaccacaaag 1620
gaagctcgta cgagaaacaa gaccgaaaag tggtttgaga aggtaaagaa gagggaggaa 1680
caaaagaagc gagaaaatgg agaacagtct accagtgaac aggagcaaag gggagtaaaa 1740
aggacctggg aaaacgacaa tgaatttgat agcgacgtag aagaagaaga agatggaaac 1800
aacactcaag aacaacagcg tgtaaagaga catgccattt ctgtgtaa 1848

```

&lt;210&gt; 225

&lt;211&gt; 611

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 225

```

Met Glu Tyr Ile Gly Glu Lys Asn Asn Asn Pro Val Ser Asn Glu Ser
 1          5          10          15
Val Ser Glu Lys Glu Leu Lys Leu Arg Ser Ser Phe Leu Met Ile Gly
 20          25          30
Lys Lys Thr Ser Lys Tyr Glu Gln Val Met Gly Val Tyr Glu Ala Ile
 35          40          45
Glu Ser Ile Arg Gln Ser Glu Leu Ser Glu Asp Thr Phe Val Val His
 50          55          60
Val Lys Lys Asp Lys Gln Leu Lys Phe Arg Leu Lys Arg Leu Gln Glu
 65          70          75          80
Leu Val Glu Asp Asp Ser Leu Arg Ile Glu Arg Ile Ser Cys Ala Pro
 85          90          95
Pro Glu Pro Gly His Leu Phe Lys Asp Asp Ala Gly His Val Thr Asp
100          105          110
Glu Glu Trp Leu Ala Thr Gln Glu Glu Asp Val Arg Lys Ile Asn Thr
115          120          125
Ile Val Lys Glu Lys Leu Lys Arg Lys Asp Lys Asp Phe Lys Phe Ser
130          135          140
Gln Leu Tyr Arg Tyr Met Ser Asn Ser Leu Ser Glu Ala Val Glu Lys
145          150          155          160
Lys His Asp Cys Met Ile Ile Ser Ser Asp Phe Leu Ile Gly Leu Gly
165          170          175
Phe Ser Thr Met Asn Val Thr His Ala Leu Lys Ser Met Glu Arg Thr
180          185          190
Met Gln Lys His Gly Phe Lys Asp Met Met Val Pro Leu Val Glu Ile
195          200          205
Cys His Arg Thr His Tyr Lys Gly Glu Tyr Ile Ala Asn Pro Ile Phe
210          215          220
Lys Ser His Ser Ser His Cys Leu Ile Val Pro Leu Phe Met Val Ala
225          230          235          240
Gly Val Phe Ala Arg Ser Ala His Pro Ser Ala Ala Ser Ile Glu Met
245          250          255
Tyr Leu Ser Thr Leu Ala Tyr Ala Val Ile Lys Asp Glu Lys Gln Arg
260          265          270
Gln Ile Arg Glu Glu Leu Ala Arg Lys Asn Leu Gln Ile Lys Glu Glu
275          280          285
Leu Glu Asn Gln Val Glu Lys Thr Thr Lys Val Glu Lys Glu Leu Glu
290          295          300
Thr Gln Val Val Lys Thr Thr Lys Val Glu Lys Glu Leu Glu Thr Gln
305          310          315          320
Val Val Lys Lys Glu Glu Tyr Lys Asn Ser Tyr Ile Glu Thr Glu Gln

```

<400> 226						
atggagtata	taggggaaca	aaaactgata	aatctcctgg	atgagacacc	tgaagaagac	60
gagttacagc	tacgctcttc	ttttctaattg	attggagaaa	aacaatatga	aaagtatgaa	120
gaagttaatga	gtacatttga	agcagttgaa	actatccgaa	agagtgaa	tagagacggc	180
gttttcattg	tacaattaaa	ggaaaataaaa	cacattactt	ttaagggggg	actgaaagaa	240
ttaagagagc	tcacagggga	caattccctc	aagatagaat	cattattatc	ctctattaag	300
cctgagaaaag	gacacgttat	acttaaaaac	acgtctacaa	ctactgatga	cgagtggctt	360
gcttctcaag	acaaagacgt	acaggaagta	aataagctcg	taaaggaaaa	gacacggatg	420
ttgttttagag	ggttttat	cagtccaact	tacaggata	taacaaaaag	tcttctctca	480
atacctttcg	gggaaaagca	acgttttgtt	gttagcacag	attttttgat	tgtgtctcgg	540
tttagtgcgt	atgatgtcat	ggaaaaatta	atagcgatag	agggaaatat	gcggaaaagt	600
ggtctgaaat	atacatgggt	gcctgtggcc	gaagtgtgcc	atctcaaaaa	atacaagggt	660
gatattggtg	taaaccocat	tttcaagagt	tatcattccc	attgcctagt	tattccactg	720
gtgtatctag	ggtacatgtt	ttcccgtaat	gttcaacccc	catctctaga	agtggagacg	780
tatctatctg	cgttagcgtt	tgctattgat	ttgtacggca	gggaagaaat	gcgcaagtct	840
tgcattgcgat	tatgtgagga	tattttctgag	gtgaaaagg	ggttaa		885

WO 01/38351

PCT/US00/28888

316

<210> 227  
 <211> 290  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 227

Met	Glu	Tyr	Ile	Gly	Glu	Gln	Lys	Leu	Ile	Asn	Leu	Leu	Asp	Glu	Thr
1				5					10					15	
Pro	Glu	Glu	Asp	Glu	Leu	Gln	Leu	Arg	Ser	Ser	Phe	Leu	Met	Ile	Gly
			20					25					30		
Glu	Lys	Gln	Tyr	Glu	Lys	Tyr	Glu	Glu	Val	Met	Ser	Thr	Phe	Glu	Ala
		35					40					45			
Val	Glu	Thr	Ile	Arg	Lys	Ser	Glu	Phe	Arg	Asp	Gly	Val	Phe	Ile	Val
	50					55				60					
Gln	Leu	Lys	Glu	Asn	Lys	His	Ile	Thr	Phe	Glu	Gly	Gly	Leu	Lys	Glu
65				70						75				80	
Leu	Arg	Glu	Leu	Thr	Gly	Asp	Asn	Ser	Leu	Lys	Ile	Glu	Ser	Leu	Leu
				85				90					95		
Ser	Ser	Ile	Lys	Pro	Glu	Lys	Gly	His	Val	Ile	Leu	Lys	Asn	Thr	Ser
			100					105					110		
Thr	Thr	Thr	Asp	Asp	Glu	Trp	Leu	Ala	Ser	Gln	Asp	Lys	Asp	Val	Gln
		115					120					125			
Glu	Val	Asn	Lys	Leu	Val	Lys	Glu	Lys	Thr	Arg	Met	Leu	Phe	Arg	Gly
	130					135					140				
Phe	Tyr	Phe	Ser	Pro	Tyr	Tyr	Ile	Thr	Lys	Ser	Leu	Pro	Gln	Ile	Pro
145					150					155					160
Phe	Gly	Glu	Lys	Glu	Arg	Phe	Val	Val	Ser	Thr	Asp	Phe	Leu	Ile	Gly
				165					170					175	
Leu	Gly	Phe	Ser	Ala	Asp	Asp	Val	Met	Glu	Lys	Leu	Ile	Ala	Ile	Glu
			180					185					190		
Gly	Asn	Met	Arg	Lys	Ser	Gly	Leu	Lys	Tyr	Thr	Trp	Val	Pro	Val	Ala
	195						200					205			
Glu	Val	Cys	His	Leu	Lys	Lys	Tyr	Lys	Gly	Asp	Ile	Val	Val	Asn	Pro
	210					215					220				
Ile	Phe	Lys	Ser	Tyr	His	Ser	His	Cys	Leu	Val	Ile	Pro	Leu	Val	Tyr
225					230					235					240
Leu	Gly	Tyr	Met	Phe	Ser	Arg	Asn	Val	Gln	Pro	Pro	Ser	Leu	Glu	Val
				245					250					255	
Glu	Thr	Tyr	Leu	Leu	Ala	Phe	Ala	Ile	Asp	Leu	Tyr	Gly	Arg	Glu	Glu
			260					265					270		
Met	Arg	Lys	Ser	Cys	Met	Arg	Leu	Cys	Glu	Asp	Ile	Ser	Glu	Val	Lys
		275					280						285		
Arg	Gly														
	290														

<210> 228  
 <211> 2769  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 228

atggagtc	aa	tcaagga	aca	gcagcag	cag	cagcca	actg	tcacttt	tctc	tgagga	acca	60
gatcaagt	ttt	atgaatt	tga	ggatact	act	actact	tctg	ccaagaa	aacc	aactcct	tcc	120
aaggcca	agt	ttgctg	ctgg	aagaaga	atg	gtctct	aagc	agaggag	gaa	cactat	cagg	180
agttcc	acaca	cgaaact	gt	ggaaga	agt	gtaggag	agg	aagaaga	aca	gcagcag	cag	240
actcct	ccag	aaatcac	acc	cgccgag	aag	aagcag	caat	ctcttca	aga	actggac	gct	300
cttatgg	gca	aggtg	ccagc	tcattct	tgac	gtgagt	gttc	tgcccaa	atc	tgttgct	gaa	360
tttctg	gaga	atgacga	aga	tgaggac	gaa	gaattg	gaga	agaata	aagaa	ggcgcag	aaa	420
tcggta	ctgt	tcaatag	tgt	gatgaac	tct	ggacgc	acag	aactgt	cccc	ttccac	cttt	480
tgtgat	gggt	gtgtct	caaa	ggtcaag	tgcg	gcattt	gaag	gaaagg	atct	ggttag	caac	540



```

attgtcaagg ttgagggaga agctgtgaag aaaactgcaa tcgccactga tactacaaaa 600
ctggccaatc tattccttgg ttgtatgaat ctccagttcc atgagcacgt gactattgaa 660
acactcaaca agaaggccct tgataaggga ggccctctct tcacattgaa gctctctgat 720
gctgtatatg tggacgagat ggatttggag aagaagaggc agatatttgg aagtaatgga 780
gataagtcac tgtttaagga acttggagga aactatattg atagtgcaat caagtcaact 840
ggatttgtca tgtcaactcc cagttcttcg tctaccaaga aggcaggaac acatttcaag 900
accactaacc aaatttgtga agaaagtgtc actgaatcta tgagaaatgg atgttgttgc 960
ttcaagaacg acaagtgtgt ggccaagagg gagagtaacc tcaagtcact gaacaatact 1020
gtatttggag aagaggatga cgaaaagtca gcatatgcat acagcgacag tgaggatgaa 1080
gacgaagatg aaaacgagga ggaagttgat tacgattaca acaatgaaac tattgaaagt 1140
tcagttggaa atgtcatcaa gaatcttatt agaaaaacta tcggtctcag tgatgtagag 1200
gaggaaaagg aagaggggtga gcagtcagag gaagaagaag aagactccga tgatgatgat 1260
gacgacgcct catcagtggtg ttcttcttcc tcttcgtctt catctgtcac tgttgtagct 1320
gctgctgaag aagaagagga agaggatgag gaggataagg ataaggatac agcaacagta 1380
gtagaggatg aagatgacaa ggaaagtgtt atcagcagta gcagtgaaga ttcagaagaa 1440
gatgaggatg atgatgtgtc aacttcccag tgttcagaag ttgtgtttgg ggatgtaaca 1500
gagtgcgaat tcgacgagag cgatgggaac cctctctacc tggcttcaga caacagcttc 1560
agaccatctg cttcagtgac caaatatcct caatctgagg aagagatgga tgtttctctc 1620
ctatcaaaga acagatcaac tcctgtctgt ctatctctat gcagacactc ctctggatgc 1680
atcaccaact cattcaacat gtccactatc ctcaagtctc ttaagttgtt cctgcccga 1740
actgaggctg ctgaggattg tgtgcacatc gagtctacaa agaagaagga tgaggatgaa 1800
gatgaggagg atcagggact tgatctgcaa aacagccagt actactcagt acttgtcgat 1860
gtggacaatc ttattatctt ttctatgggt tccactacat acgaatcttc aatgggtggag 1920
gtagattatg ataagagttt ctggtcctct ttcgacaagt ctgtgaagcc ttattgtgag 1980
agcaagaaga gtgctcttat taatgctcta tgtgaagata atgtgactgc caaggtatac 2040
gctactgtcc atacactggc tattocattc tgtgaatcta tgcccattaa ccacattaat 2100
aacactactc cttatggaag ctacaagacc ttcagaatta gtttgccagg gaacttttct 2160
gggcaacata acgacatcaa caacaattgg agatctgaca tgtactactaa gatggttgaa 2220
aatcttctaa agagggaagt tggtgagaac aagacacaca gccgcagata cgttcgcaac 2280
cttattgttg acggaggcgt gggagaaaat agtggcaact acttgaaggt gcacgagaat 2340
aatgaggata tttttggaag cattgaagcg aattcaatgt ctgccaagac tgctgtctgc 2400
gcctttaaga atgttgccaa gaaatgtgac ctcatccaga ctacaaccaa cgacatcttg 2460
actgggcctt tcaagcaata cctcattgat tacaagtata attcggccag aaagaatatt 2520
atcatggagc cttgtgaggg ggatgaaact acagcacatg agatgaagag ggctcaagac 2580
gcatacaaac aagcactcca cagggcaaag attacagcaa gctccatctc gctgaggggc 2640
atctggcacg agatgatcac cagggatatg aatacaactt acaatagcat gtttatgtat 2700
attcctgatt ttataaata tgttcaggta tcacctgtaa atgtatcacc attatatatg 2760
ttggattag

```

&lt;210&gt; 229

&lt;211&gt; 922

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 229

```

Met Glu Ser Ile Lys Glu Gln Gln Gln Gln Gln Pro Thr Val Thr Phe
 1          5          10          15
Ser Glu Glu Pro Asp Gln Val Tyr Glu Phe Glu Asp Thr Thr Thr
 20          25          30
Ser Ala Lys Lys Pro Thr Pro Ser Lys Ala Lys Phe Ala Ala Gly Arg
 35          40          45
Arg Met Val Ser Lys Gln Arg Arg Asn Thr Ile Arg Ser Pro His Thr
 50          55          60
Glu Thr Val Glu Glu Val Val Gly Glu Glu Glu Glu Gln Gln Gln Gln
 65          70          75          80
Thr Pro Pro Glu Ile Thr Pro Ala Glu Lys Lys Gln Gln Ser Leu Gln
 85          90          95
Glu Leu Asp Ala Leu Met Gly Lys Val Pro Ala His Leu Asp Val Ser
100          105          110
Val Leu Ala Lys Ser Val Ala Glu Phe Leu Glu Asn Asp Glu Asp Glu
115          120          125

```

Asp	Glu	Glu	Leu	Glu	Lys	Asn	Lys	Lys	Ala	Gln	Lys	Ser	Val	Leu	Phe
130						135					140				
Asn	Ser	Val	Met	Asn	Ser	Gly	Arg	Thr	Glu	Leu	Ser	Pro	Ser	Thr	Phe
145					150					155					160
Cys	Asp	Gly	Cys	Val	Ser	Lys	Val	Lys	Ser	Ala	Phe	Glu	Gly	Lys	Asp
				165					170					175	
Leu	Val	Ser	Asn	Ile	Val	Lys	Val	Glu	Gly	Glu	Ala	Val	Lys	Lys	Thr
			180					185					190		
Ala	Ile	Ala	Thr	Asp	Thr	Thr	Lys	Leu	Ala	Asn	Leu	Phe	Leu	Gly	Cys
		195					200					205			
Met	Asn	Leu	Gln	Phe	His	Glu	His	Val	Thr	Ile	Glu	Thr	Leu	Asn	Lys
210						215					220				
Lys	Ala	Leu	Asp	Lys	Gly	Gly	Pro	Leu	Phe	Thr	Leu	Lys	Leu	Ser	Asp
225					230					235					240
Ala	Val	Tyr	Val	Asp	Glu	Met	Asp	Leu	Glu	Lys	Lys	Arg	Gln	Ile	Phe
				245					250					255	
Gly	Ser	Asn	Gly	Asp	Lys	Ser	Leu	Phe	Lys	Glu	Leu	Gly	Gly	Asn	Tyr
			260					265					270		
Ile	Asp	Ser	Ala	Ile	Lys	Ser	Thr	Gly	Leu	Val	Met	Ser	Thr	Pro	Ser
		275					280					285			
Ser	Ser	Ser	Thr	Lys	Lys	Ala	Gly	Thr	His	Phe	Lys	Thr	Thr	Asn	Gln
290						295					300				
Ile	Val	Glu	Glu	Ser	Val	Thr	Glu	Ser	Met	Arg	Asn	Gly	Cys	Cys	Cys
305					310					315					320
Phe	Lys	Asn	Asp	Lys	Trp	Leu	Ala	Lys	Arg	Glu	Ser	Asn	Leu	Lys	Ser
				325					330					335	
Leu	Asn	Asn	Thr	Val	Phe	Gly	Glu	Glu	Asp	Asp	Glu	Lys	Ser	Ala	Tyr
			340					345					350		
Ala	Tyr	Ser	Asp	Ser	Glu	Asp	Glu	Asp	Glu	Asp	Glu	Asn	Glu	Glu	Glu
		355					360					365			
Val	Asp	Tyr	Asp	Tyr	Asn	Asn	Glu	Thr	Ile	Glu	Ser	Ser	Val	Gly	Asn
	370					375					380				
Val	Ile	Lys	Asn	Leu	Ile	Arg	Lys	Thr	Ile	Gly	Leu	Ser	Asp	Val	Glu
385					390					395					400
Glu	Glu	Lys	Glu	Glu	Gly	Glu	Gln	Ser	Glu	Glu	Glu	Glu	Glu	Asp	Ser
				405					410					415	
Asp	Asp	Asp	Asp	Asp	Asp	Ala	Ser	Ser	Val	Cys	Ser	Ser	Ser	Ser	Ser
			420					425					430		
Ser	Ser	Ser	Val	Thr	Val	Val	Ala	Ala	Ala	Glu	Glu	Glu	Glu	Glu	Glu
		435					440					445			
Asp	Glu	Glu	Asp	Lys	Asp	Lys	Asp	Thr	Ala	Thr	Val	Val	Glu	Asp	Glu
	450					455					460				
Asp	Asp	Lys	Glu	Ser	Val	Ile	Ser	Ser	Ser	Ser	Glu	Asp	Ser	Glu	Glu
465					470					475					480
Asp	Glu	Asp	Asp	Asp	Gly	Ala	Thr	Ser	Gln	Cys	Ser	Glu	Val	Val	Phe
				485					490					495	
Gly	Asp	Val	Thr	Glu	Cys	Glu	Phe	Asp	Glu	Ser	Asp	Gly	Asn	Pro	Leu
			500					505					510		
Tyr	Leu	Ala	Ser	Asp	Asn	Ser	Phe	Arg	Pro	Ser	Ala	Ser	Val	Thr	Lys
		515					520					525			
Tyr	Pro	Gln	Ser	Glu	Glu	Glu	Met	Asp	Val	Ser	Leu	Leu	Ser	Lys	Asn
	530					535					540				
Arg	Ser	Thr	Pro	Val	Cys	Leu	Ser	Leu	Cys	Arg	His	Ser	Ser	Gly	Cys
545					550					555					560
Ile	Thr	Asn	Ser	Phe	Asn	Met	Ser	Thr	Ile	Leu	Lys	Ser	Leu	Lys	Leu
				565					570					575	
Phe	Pro	Ala	Gly	Thr	Glu	Ala	Ala	Glu	Asp	Cys	Val	His	Ile	Glu	Ser
			580					585					590		
Thr	Lys	Lys	Lys	Asp	Glu	Asp	Glu	Asp	Glu	Glu	Asp	Gln	Gly	Leu	Asp
		595					600					605			
Leu	Gln	Asn	Ser	Gln	Tyr	Tyr	Ser	Val	Leu	Val	Asp	Val	Asp	Asn	Leu

610		615		620
Ile Ile Phe Ser Met Gly Ser Thr Thr Tyr Glu Ser Ser Met Val Glu				
625		630		635
Val Asp Tyr Asp Lys Ser Phe Trp Ser Ser Phe Asp Lys Ser Val Lys				
	645		650	655
Pro Tyr Cys Glu Ser Lys Lys Ser Ala Leu Ile Asn Ala Leu Cys Glu				
	660		665	670
Asp Asn Val Thr Ala Lys Val Tyr Ala Thr Val His Thr Leu Ala Ile				
	675		680	685
Pro Phe Cys Glu Ser Met Pro Ile Asn His Ile Asn Asn Thr Thr Pro				
	690		695	700
Tyr Gly Ser Tyr Lys Thr Phe Arg Ile Ser Leu Pro Gly Asn Phe Ser				
705		710		715
Gly Gln His Asn Asp Ile Asn Asn Asn Trp Arg Ser Asp Met Tyr Thr				
	725		730	735
Lys Met Val Glu Asn Leu Leu Lys Arg Glu Val Val Glu Asn Lys Thr				
	740		745	750
His Ser Arg Arg Tyr Val Arg Asn Leu Ile Val Asp Gly Gly Val Gly				
	755		760	765
Glu Asn Ser Gly Asn Tyr Leu Lys Val His Glu Asn Asn Glu Asp Ile				
	770		775	780
Phe Gly Ser Ile Glu Ala Asn Ser Met Ser Ala Lys Thr Ala Ala Ala				
785		790		795
Ala Phe Lys Asn Val Ala Lys Lys Cys Asp Leu Ile Gln Thr Thr Thr				
	805		810	815
Asn Asp Ile Leu Thr Gly Pro Phe Lys Gln Tyr Leu Ile Asp Tyr Lys				
	820		825	830
Tyr Asn Ser Ala Arg Lys Asn Ile Ile Met Glu Pro Cys Glu Gly Asp				
	835		840	845
Glu Thr Thr Ala His Glu Met Lys Arg Ala Gln Asp Ala Tyr Lys Gln				
	850		855	860
Ala Leu His Arg Ala Lys Ile Thr Ala Ser Ser Ile Ser Leu Arg Gly				
865		870		875
Ile Trp His Glu Met Ile Thr Arg Asp Met Asn Thr Thr Tyr Asn Ser				
	885		890	895
Met Phe Met Tyr Ile Pro Asp Phe Tyr Lys Tyr Val Gln Val Ser Pro				
	900		905	910
Val Asn Val Ser Pro Leu Tyr Met Leu Asp				
	915		920	

&lt;210&gt; 230

&lt;211&gt; 846

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 230

atgtctcctg	ttatctccca	acaatcttcc	ccttctgcta	ccagcacggc	tgcagccaga	60
ataattagta	ctgccaacct	tagagttcta	gggtgtcaaaa	ataaggaaga	gaaagatgag	120
gaagaagaac	aacagggaagt	tgaaccagaa	attattgaac	cagctaccga	ttttgagata	180
ccattttctc	cagcactcac	aattctgcata	tacatcaatg	cgaatcgcac	acacattaat	240
tcaaagggtg	tgtgcttaaa	taggaaaaag	ataaaaccta	cttcaacaat	aaacaaaaac	300
caggacgtcc	ctccagaact	agcaaattgcg	tccagttatc	ttgtacaaac	tgaacacgta	360
accgacaagt	tcctttcatc	ccactgttct	atatgcaact	ataacgtgaa	cgacggggaa	420
tacaaatcgg	ctctaagcac	aacaagaaat	ggagatcagc	ccttgatgag	aaagtcggtc	480
agatatgttc	ccttaaacga	agataatgtg	gtagtccaga	aaggaacata	ttatgggact	540
actttttatac	cagaaaagac	gggaagaaga	atthttgtgt	tctctcatta	caagaagtct	600
cctcgtccaa	ttacagctaa	attatgttgt	cttctggaaa	ctataaactc	gttcaacggc	660
agctgttctt	cttcttcttc	tgcgtcctcc	tccagcaacg	cccagggcc	tattgaagaa	720
ttccaagtgt	cttcatccat	atthtttcaag	aaagaagagt	gttgtccct	gcaaataaag	780
tgggttgaac	aaaatgagct	ggatgcagaa	tcacctgttc	ttgtacttct	aatgttagcg	840

WO 01/38351

320

PCT/US00/28888

ctatga

846

<210> 231  
 <211> 281  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 231

Met	Ser	Pro	Val	Ile	Ser	Gln	Gln	Ser	Ser	Pro	Ser	Ala	Thr	Ser	Thr
1				5					10					15	
Ala	Ala	Ala	Arg	Ile	Ile	Ser	Thr	Ala	Asn	Leu	Arg	Val	Leu	Gly	Val
			20					25					30		
Lys	Asn	Lys	Glu	Glu	Lys	Asp	Glu	Glu	Glu	Gln	Gln	Glu	Val	Glu	
		35					40					45			
Pro	Glu	Ile	Ile	Glu	Pro	Ala	Thr	Asp	Phe	Glu	Ile	Pro	Phe	Ser	Pro
		50				55					60				
Ala	Leu	Thr	Ile	Cys	Ile	Tyr	Ile	Asn	Ala	Asn	Arg	Ile	His	Ile	Asn
65					70				75					80	
Ser	Lys	Gly	Val	Cys	Leu	Asn	Arg	Lys	Lys	Ile	Lys	Pro	Thr	Ser	Thr
			85						90					95	
Ile	Asn	Lys	Asn	Gln	Asp	Val	Pro	Pro	Glu	Leu	Ala	Asn	Ala	Ser	Ser
			100					105					110		
Tyr	Leu	Val	Gln	Thr	Glu	His	Val	Thr	Asp	Lys	Phe	Leu	Ser	Ser	His
		115					120					125			
Cys	Ser	Ile	Cys	Asn	Tyr	Asn	Val	Asn	Asp	Gly	Glu	Tyr	Lys	Ser	Ala
		130				135					140				
Leu	Ser	Thr	Thr	Arg	Asn	Gly	Asp	Gln	Pro	Leu	Met	Arg	Lys	Ser	Val
145					150					155					160
Arg	Tyr	Val	Pro	Leu	Asn	Glu	Asp	Asn	Val	Val	Val	Gln	Lys	Gly	Thr
			165						170					175	
Tyr	Tyr	Gly	Thr	Thr	Phe	Ile	Pro	Glu	Lys	Thr	Gly	Arg	Arg	Ile	Leu
			180					185					190		
Trp	Phe	Ser	His	Tyr	Lys	Lys	Ser	Pro	Arg	Pro	Ile	Thr	Ala	Lys	Leu
		195					200					205			
Cys	Cys	Leu	Leu	Glu	Thr	Ile	Asn	Ser	Phe	Asn	Gly	Ser	Cys	Ser	Ser
		210				215					220				
Ser	Ser	Ser	Ala	Ser	Ser	Ser	Ser	Asn	Ala	Pro	Gly	Pro	Ile	Glu	Glu
225						230				235				240	
Phe	Gln	Val	Ser	Ser	Ser	Ile	Phe	Phe	Lys	Lys	Glu	Glu	Cys	Cys	Pro
				245					250					255	
Leu	Gln	Met	Lys	Trp	Val	Glu	Gln	Asn	Glu	Leu	Asp	Ala	Glu	Ser	Pro
			260					265					270		
Val	Leu	Val	Leu	Leu	Met	Leu	Ala	Leu							
		275					280								

<210> 232  
 <211> 1470  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 232

atggaatctg	taagagacgt	taaattttac	acttttatga	atgtattggc	agagaaggcg	60
aaaaagatac	agcgcctaaa	caaggataaa	ggttggagga	cttcaataaa	cgctgaaatt	120
ggatatggag	gagcaagact	catggatgtg	cgcttcacgg	gcaggaaatc	aatggacgaa	180
ttggcaagat	gtctctataa	ctgcgatgga	gaatatacaa	ctcttagact	cgtgggttca	240
agtgcgggaa	atattatagt	atattcttta	gcctttataa	tgggaatcag	aggcgagtgt	300
tgtgggttta	atgtcaataa	tcgcctacga	atgggaaaaa	taatagacag	agagttgttt	360
tataaaataa	caggattaaa	tttcctgaa	actgtaaaat	gcacatgtga	tggagtacga	420
gccatctgtg	atttgttcct	ggaggtggct	gctcttcaag	aacaccccg	ctggcatgaa	480
actaaagaag	tagggaaaaa	acaacaacaa	catttcaacg	aattcgggtc	ccagtaccct	540

```

ggcacaaaat tcaataagcg gcacaaacta tccactaaaa taattcagca aatgtttttca 600
gaagagaaga ctatggaaca agttctagcc tttagtgaag gaactgccgc tagtggattt 660
tcagatttgt acgtagaagc acctatacaa tacgtgggta atatgtatag agctatcagt 720
aatatggaag gaagagtagg tgccatgtat aatttgtcga gagttttaat actcttatgt 780
tctaggtggg aaaagaaacc agggatataaa aatgactttt atagtaagtg tgagatgtac 840
ataggctcca aaaaaattgt tgatgacgag agctttatatt tcaccgatct cataactggg 900
gatttagttc ctctagttcg attggcccca tcaaacgaag atatacagag agatgttata 960
aggttcaatg attctactga tatattaatg gacagtattg acgtgaggga tgttggtttg 1020
cctgtacttt ctaaaataat atggcaaaac gtttctgcac gtctaaaatt gcgcaacaat 1080
aaatccctct ccaaactagc caaatggaaa tggaatggta tgggtgtcaac acacgacaac 1140
tttgattcga atgattatgt cattgaacat aaacgtcaac ttgcagcgga tataatgtcc 1200
gatagtctat caaaaaatca ccttccaaat tttagtaaaa caataacgga gtacgatgaa 1260
aaggaaaaata aaacaacacc cttaatatgt tggaattata tttttgaatt gtcccctatg 1320
gggaaacact tgttcccttt agaggaagtt tgcggattct atgaggcgag ttacctctc 1380
ataacaccat ggcaattaaa gggtgtccag aaaaagagag gaaggcagat ggcatctac 1440
ggtcctagaa aacgacctcg cacacagtaa                                     1470

```

&lt;210&gt; 233

&lt;211&gt; 487

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 233

```

Met Glu Ser Val Arg Asp Val Lys Phe Tyr Thr Phe Met Asn Val Leu
1      5      10      15
Ala Glu Lys Ala Lys Lys Ile Gln Arg Leu Asn Lys Asp Lys Gly Trp
20     25     30
Arg Thr Ser Ile Asn Ala Glu Ile Gly Tyr Gly Gly Ala Arg Leu Met
35     40     45
Asp Val Arg Phe Thr Gly Arg Lys Ser Met Asp Glu Leu Ala Arg Cys
50     55     60
Leu Tyr Asn Cys Asp Gly Glu Tyr Thr Thr Leu Arg Leu Val Gly Ser
65     70     75     80
Ser Ala Gly Asn Ile Ile Val Tyr Ser Leu Ala Phe Ile Met Gly Ile
85     90     95
Arg Gly Glu Cys Cys Gly Phe Asn Val Asn Asn Arg Leu Arg Met Gly
100    105    110
Lys Ile Ile Asp Arg Glu Leu Phe Tyr Lys Ile Thr Gln Phe Pro Glu
115    120    125
Thr Val Lys Cys Thr Cys Asp Gly Val Arg Ala Ile Cys Asp Leu Phe
130    135    140
Leu Glu Val Ala Ala Leu Gln Glu His Pro Ala Trp His Glu Thr Lys
145    150    155    160
Glu Val Gly Lys Lys Gln Gln Gln His Phe Asn Glu Phe Gly Ser Gln
165    170    175
Tyr Pro Gly Thr Lys Phe Asn Lys Arg His Lys Leu Ser Thr Lys Ile
180    185    190
Ile Gln Gln Met Phe Ser Glu Glu Lys Thr Met Glu Gln Val Leu Ala
195    200    205
Phe Ser Glu Gly Thr Ala Ala Ser Gly Phe Ser Asp Leu Tyr Val Glu
210    215    220
Ala Pro Ile Gln Tyr Val Val Asn Met Tyr Arg Ala Ile Ser Asn Met
225    230    235    240
Glu Gly Arg Val Gly Ala Met Tyr Asn Leu Ser Arg Val Leu Ile Leu
245    250    255
Leu Cys Ser Arg Trp Glu Lys Lys Pro Gly Tyr Lys Asn Asp Phe Tyr
260    265    270
Ser Lys Cys Glu Met Tyr Ile Gly Ser Lys Lys Ile Val Asp Asp Glu
275    280    285
Ser Phe Ile Phe Thr Asp Leu Ile Thr Gly Asp Leu Val Pro Leu Val
290    295    300

```

WO 01/38351

PCT/US00/28888

322

Arg Leu Ala Pro Ser Asn Glu Asp Ile Gln Arg Asp Val Ile Arg Phe  
 305 310 315 320  
 Asn Asp Ser Thr Asp Ile Leu Met Asp Ser Ile Asp Val Arg Asp Val  
 325 330 335  
 Val Leu Pro Val Leu Ser Lys Ile Ile Trp Gln Asn Val Ser Ala Arg  
 340 345 350  
 Leu Lys Leu Arg Asn Asn Lys Ser Leu Ser Lys Leu Ala Lys Trp Lys  
 355 360 365  
 Trp Asn Gly Met Val Ser Thr His Asp Asn Phe Asp Ser Asn Asp Tyr  
 370 375 380  
 Val Ile Glu His Lys Arg Gln Leu Ala Ala Asp Ile Met Ser Asp Ser  
 385 390 395 400  
 Leu Ser Lys Asn His Leu Pro Asn Phe Ser Lys Thr Ile Thr Glu Tyr  
 405 410 415  
 Asp Glu Lys Glu Asn Lys Thr Thr Pro Leu Ile Cys Trp Asn Tyr Ile  
 420 425 430  
 Phe Glu Leu Ser Pro Met Gly Lys His Leu Phe Pro Leu Glu Glu Val  
 435 440 445  
 Cys Gly Phe Tyr Glu Ala Ser Leu Pro Leu Ile Thr Pro Trp Gln Leu  
 450 455 460  
 Lys Val Val Gln Lys Lys Arg Gly Arg Gln Met Val Ile Tyr Gly Pro  
 465 470 475 480  
 Arg Lys Arg Pro Arg Thr Gln  
 485

<210> 234  
 <211> 4698  
 <212> DNA  
 <213> SHRIMP

<400> 234  
 atgtcaacaa cgcaaacgca aacaatagaa cggcccctgc ctggttaagaa caacgaagac 60  
 aatagccgtt tagcttgctt attggctgaa gggctacagc aacaacaaca acaacaagat 120  
 ggcgatagcg aaatttctct accgcttggt aatgcgggaa cttttgcgtg ttatgattct 180  
 acccttgcaa acctcaccga ggggcgttta ggaagtgaag cagaaaatgc aaaaataagg 240  
 gtaaaaatac acccgctctgt gtttattata gagacgaata aagagatgac tattgaagaa 300  
 atatctacaa aatctctaaa tgcatttagt gaaaaaagag cacgagaagc acgacgattt 360  
 tcatctctga cagaacaaaa atttcctcga ggaggaggag gatgttattc tcgtaaaaat 420  
 gagaggttta tcgaaggcga aattaacaac atcaagctga acatggaaga aactgcttcg 480  
 tcttttagaga gattggcagg gcttttgctt gttgtcatta atattaagga ctggacaatg 540  
 catgatgaga aagaaatacg gctagatctt aaaggaaaac acggcatgga agaacttgct 600  
 aatatatccc atctgaatca agaagaatgg gaaatggaaa gactttcttc ctcaatagta 660  
 ttgaaagacg cctatggtgt gttttatgcc catcacggca tacttgatat tgttcttacg 720  
 acctctagat tcacagggaa attattacaa caccctgtga tatttcgtct aatggatgtg 780  
 aaggtgtgga taaacacccc cctccagata gcatttcctg acaccagtaa gaacccaaat 840  
 gcaaaagaaa ttctctatca acatccctct cttacaaggc tacgtgattt aaatgacatg 900  
 gcttcaaact ccaagtcagt ttcttccatt atcataccag agttgtcaaa atttaactcg 960  
 actgaatttg gtatgcacta ctttacggcc cagtgccttt ttggaaaaaa taccaattct 1020  
 ttaaaggatt tggttacacg gtattatcaa ctatcattta aaaataaacc tcaacccaaa 1080  
 ctttatgaac caacagcaac agcaacagca gcctcctcct cctcctcaac cgcctcattg 1140  
 acgaccgaac aaaaggaaaa aatcgcacaa tcgattttat cgtctaaagg aaaatcttta 1200  
 ggagatgtat cttccaccct ttctaaggaa tacgatgaaa atagaaaacg tacaagagg 1260  
 caaaaaactt ctaccgatac caacattgtc ccttcagggg cacctacttc catttccatg 1320  
 aaaaacccag ttacttgctt ctttgggcct caatacactt caatcatgga ctgtatatcg 1380  
 gagaaaacag actggataga aatgcacctt tttttaacct ctcttaacga cgctgaacat 1440  
 aataaaacac tcgtgtgcga cagaaaaagt aacgtgtcgg aaatacacga ttctgggaagg 1500  
 tttcttacat tcggtcaaaa taatactaca gcctttatac cagatgttga tattcctacg 1560  
 ttaaaattaa ttctgagaga cgattctggg gaatcttctg ctgctataat agcatctctg 1620  
 atatattata ataattgaaa tctagaaggg aggggaattct caaatgtctc tgatgctgtt 1680  
 gtgggacttt tctcgggcgg atctgctatt acggtaggag atattgctcg agagattgca 1740

WO 01/38351

323

PCT/US00/28888

```

tccatataca atattggaag agaatctaac tgcgattcca tactattccc aggggagcct 1800
atactggcgc gaagaagaag ttatggacgc cagtacagat ggtacgatcc cattaactgc 1860
gtggtgggtc tttatcggtc gtgttttagaa acaatgacaa gaaatattat gagaggacag 1920
ccagtgaag tgatgagac cgcttggatg tacatgcacc agcaggtact tcaagttggt 1980
cttcttccat tttttgattg cgttttgaaa tcgggcgtat gggctgtaaa ggaggctaga 2040
caactaacag attatatagt acgtgaagtgc ctactaaaat atacagccga tcctgatcaa 2100
cacaaatfff tattattcaa gaagcccggtg atggatctaa ttgcaaagat tggtacacat 2160
tatgcagtta ttcattcggc agccgataat ggaggcgtgt gccttgcttt ccctagagat 2220
cctcccttta ttgtagaaaa tgatacgtct ctcagatact atacactgac cgatacacct 2280
cagagtattt tgaatggaga taatgtagcc gaaaacttaa agtctgccac ttcagtcgct 2340
tcttctccat catcctcctc cagatattca tcagaaaccc ctattagggt agttaatctt 2400
cctgtaccaa caggacggtt tttaaagatg aataaggatc tggaaactttt cattaatgta 2460
cctctaatat cctctaagga acaaaaacaa caacagcagc aaacaactgc cactgctcca 2520
ttttcttctg aaacatcttc aaaatcggtc ttaaattatg taccacctaa atctctaaca 2580
agaaatgtga catatggtca gaatatcgca gaagatggat tccttggatt gaaaaataaa 2640
ggtgaattgg tgcgtactt taaagttgta aagaatactg aacgcgatga tggataaaag 2700
gatatggaaa ttggtgatat taataacccat caagacgaca ctggatccct tcttcttct 2760
tcttcttcat tcgttgatgg tgtaacggaca agtttttcgg ttgatgggaa aattgaacat 2820
gttagcgcct tcctccctgg tacgacttct cagcccacaa atcttctctg tcatgcatct 2880
aaacaagtca aatattcggg aaaggaattg ggcattgaaa ctgtattctt tgaacccctt 2940
ctctcgtctg ctgtgcttta tgaagcctca aaaactaaat cgacacaaca tttaaagcca 3000
atgaggatct ataaggaatg tgtagtcct ctatctacag ggaggatcga tttttcccc 3060
agtaaagtgg gcacagtggc aggaactgga ttcgaattta tttggaaagt tcttcagtat 3120
gatactggat taccacaaac tctagaaagg ttgtcaccca agattccttc tgtaccaatt 3180
tcaggcgaag actcaaaaat ggaagtaatt gcagaatctg gtaaagggtg acaaaacatc 3240
attgctattg cagccgacca actcagaggc agtaataata tagtaggtgg tggacaaca 3300
agagcgatcc aacaacaaca acagcagcaa caacaagaaa cacaagcggg tgttccagtt 3360
aatgtgcctg ccgctttcga gcctacgttc acagagatcg aactatttct tcagaacaaa 3420
tttaggaatg ttattgctac tattatatct agaatgatga tgcttgctag caacgaagag 3480
atgaaaatta ttaaagaagt gtgcgagcac gtgtctcata ttatggctga tggattatat 3540
gttgactag atcctagaaa ggccattgaa gaaatactgg aaaggataac agctgaacaa 3600
aatgggatta ctattgatac tggaaatgaa gggtatggat ctttacgcta tgcttcttcg 3660
gggagacttt ttataaatga tgaagctagt gaagaagctg cagcggccat cggcggtgga 3720
ggtgctcttg gaactggtag aagggtgcct gtagaattac gttcaatatt ggacaaatta 3780
aataccattg gaagtactac tcaacaacaa caacagcagc agcgtcaaca gaggcaggct 3840
aataataaca atactgttcc cgaggatata aaggttcaca atgaacaaat gcaaaaaatt 3900
agagactctt ctctattcac atctaaactt ttgaattaca ttagggatga tggagaagaa 3960
gaccgtataa agacaaacat ttcagaaaca ctaaagaaat acagtagaat cccatcatac 4020
tttattgctt caaaggcaca gaaacctatc ccatggaaac acaccaagga caatatcaac 4080
ctcaacaaga ttccagaaga cttgaacttt tctcctgcac agaactctgt tgttccagtt 4140
aatccgcgcc atatccttac tgacatgcaa tggctcaact gtatttccat catcgaaact 4200
gcaacaagag attcggctat cgatcatgaa agtttccaag agcaagcggg caagactaca 4260
actcaattgg aggaactttt atctcaatgg aataatattg tatctcaagt aactgatgaa 4320
aaatccccag cttatgtttc aagtgtaaaa ttggaatggg taaataatga agctagccgt 4380
attgctgcta tacgagagaa ttcagaaaaa tcaaaaattg taatgggtgt tcaggggaag 4440
attgttaaca ttgatgagct aggtatagtg gctgttgcca ggtcaatagt agacgttgat 4500
ttttatataa aaatgcccac tgtgtgggct tctagggatt ggaagaacct gatttattat 4560
gctgttaata tagcagcaac tccccttatt aataatatat cgaggggtat catggctgct 4620
tcacagacat ctgttttata tgactcttct cttgctctta ttgctgccga gcaagctaca 4680
agaaatataa ccatgtga 4698

```

&lt;210&gt; 235

&lt;211&gt; 1551

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 235

```

Met Ser Thr Thr Gln Thr Gln Thr Ile Glu Arg Pro Leu Pro Gly Lys
  1             5             10             15
Asn Asn Glu Asp Asn Ser Arg Leu Ala Cys Leu Leu Ala Glu Gly Leu
      20             25             30

```

Gln	Gln	Gln	Gln	Gln	Gln	Gln	Asp	Gly	Asp	Ser	Glu	Ile	Ser	Leu	Pro
		35					40					45			
Leu	Val	Asn	Ala	Gly	Thr	Phe	Ala	Cys	Tyr	Asp	Ser	Thr	Leu	Ala	Asn
	50					55					60				
Leu	Thr	Glu	Gly	Arg	Leu	Gly	Ser	Glu	Thr	Glu	Asn	Ala	Lys	Ile	Arg
65					70					75					80
Val	Lys	Ile	His	Pro	Ser	Val	Phe	Ile	Ile	Glu	Thr	Asn	Lys	Glu	Met
				85					90					95	
Thr	Ile	Glu	Glu	Ile	Ser	Thr	Lys	Ser	Leu	Asn	Ala	Leu	Val	Glu	Lys
			100					105					110		
Arg	Ala	Arg	Glu	Ala	Arg	Arg	Phe	Ser	Ser	Leu	Thr	Glu	Gln	Lys	Phe
		115					120					125			
Pro	Arg	Gly	Gly	Gly	Gly	Cys	Arg	Lys	Asn	Glu	Arg	Phe	Ile	Glu	Gly
	130					135					140				
Glu	Ile	Asn	Asn	Ile	Lys	Leu	Asn	Met	Glu	Glu	Thr	Ala	Ser	Ser	Leu
145					150					155					160
Glu	Arg	Leu	Ala	Gly	Leu	Leu	Pro	Val	Val	Ile	Asn	Ile	Lys	Asp	Trp
				165					170					175	
Thr	Met	His	Asp	Glu	Lys	Glu	Ile	Arg	Leu	Asp	Leu	Lys	Gly	Asn	Asp
			180					185					190		
Gly	Met	Glu	Glu	Leu	Val	Asn	Ile	Ser	His	Leu	Asn	Gln	Glu	Glu	Trp
		195				200						205			
Glu	Met	Glu	Arg	Leu	Ser	Ser	Ser	Ile	Val	Leu	Lys	Asp	Ala	Tyr	Gly
	210					215					220				
Val	Phe	Tyr	Ala	His	His	Gly	Ile	Leu	Asp	Ile	Val	Leu	Thr	Thr	Ser
225					230					235					240
Arg	Phe	Thr	Gly	Lys	Leu	Leu	Gln	His	Pro	Val	Ile	Phe	Arg	Leu	Met
				245					250					255	
Asp	Val	Lys	Val	Trp	Ile	Asn	Thr	Pro	Leu	Gln	Ile	Ala	Phe	Pro	Asp
			260					265					270		
Thr	Ser	Lys	Asn	Pro	Asn	Ala	Lys	Lys	Ile	Leu	Tyr	Gln	His	Pro	Ser
		275					280						285		
Leu	Thr	Arg	Leu	Arg	Asp	Leu	Asn	Asp	Met	Asn	Ser	Lys	Ser	Val	Ser
	290					295					300				
Ser	Ile	Ile	Ile	Pro	Glu	Leu	Ser	Lys	Phe	Asn	Ser	Thr	Glu	Phe	Gly
305					310					315					320
Met	His	Tyr	Phe	Thr	Ala	Gln	Cys	Phe	Phe	Gly	Lys	Asn	Thr	Asn	Ser
				325					330					335	
Leu	Lys	Asp	Leu	Val	Thr	Arg	Tyr	Tyr	Gln	Leu	Ser	Phe	Lys	Asn	Lys
			340					345					350		
Pro	Gln	Pro	Lys	Leu	Tyr	Glu	Pro	Thr	Ala	Thr	Ala	Thr	Ala	Ala	Ser
		355					360					365			
Ser	Ser	Ser	Ser	Thr	Ala	Ser	Leu	Thr	Thr	Glu	Gln	Lys	Glu	Lys	Ile
	370					375					380				
Ala	Gln	Ser	Ile	Leu	Ser	Ser	Lys	Gly	Lys	Ser	Leu	Gly	Asp	Val	Ser
385					390					395					400
Ser	Thr	Leu	Ser	Lys	Glu	Tyr	Asp	Glu	Asn	Arg	Lys	Arg	Thr	Lys	Arg
				405					410					415	
Gln	Lys	Thr	Ser	Thr	Asp	Thr	Asn	Ile	Val	Pro	Ser	Gly	Ala	Pro	Thr
			420					425					430		
Ser	Ile	Ser	Met	Lys	Asn	Pro	Val	Thr	Cys	Phe	Phe	Gly	Pro	Gln	Tyr
		435				440						445			
Thr	Ser	Ile	Met	Asp	Cys	Ile	Ser	Glu	Lys	Thr	Asp	Trp	Ile	Glu	Met
	450					455					460				
His	Leu	Phe	Leu	Thr	Ser	Leu	Asn	Asp	Ala	Glu	His	Asn	Lys	Thr	Leu
465					470					475					480
Val	Val	Asp	Arg	Lys	Ser	Asn	Val	Ser	Glu	Ile	His	Asp	Ser	Gly	Arg
				485					490					495	
Phe	Leu	Thr	Phe	Gly	Gln	Asn	Asn	Thr	Thr	Ala	Phe	Ile	Pro	Asp	Val
			500					505					510		
Asp	Ile	Pro	Thr	Leu	Lys	Leu	Ile	Leu	Arg	Asp	Asp	Ser	Gly	Glu	Ser



	515						520						525				
Ser	Ala	Ala	Ile	Ile	Ala	Ser	Leu	Ile	Tyr	Tyr	Asn	Asn	Val	Asn	Leu		
	530					535					540						
Glu	Gly	Arg	Glu	Phe	Ser	Asn	Val	Ser	Asp	Ala	Val	Val	Gly	Leu	Phe		
545					550					555					560		
Ser	Gly	Gly	Ser	Ala	Ile	Thr	Val	Gly	Asp	Ile	Ala	Arg	Glu	Ile	Ala		
				565					570					575			
Ser	Ile	Tyr	Asn	Ile	Gly	Arg	Glu	Ser	Asn	Cys	Asp	Ser	Ile	Leu	Phe		
			580					585					590				
Pro	Gly	Glu	Pro	Ile	Leu	Ala	Gly	Arg	Arg	Ser	Tyr	Gly	Arg	Gln	Tyr		
		595					600					605					
Arg	Trp	Tyr	Asp	Pro	Ile	Asn	Cys	Val	Val	Gly	Arg	Ser	Cys	Leu	Glu		
	610					615					620						
Thr	Met	Thr	Arg	Asn	Ile	Met	Arg	Gly	Gln	Pro	Val	Lys	Val	Asp	Glu		
625				630						635					640		
Thr	Ala	Trp	Met	Tyr	Met	His	Gln	Gln	Val	Leu	Gln	Val	Val	Leu	Leu		
				645					650					655			
Pro	Phe	Phe	Asp	Cys	Val	Leu	Lys	Ser	Gly	Val	Trp	Ala	Val	Lys	Glu		
			660					665					670				
Ala	Arg	Gln	Leu	Thr	Asp	Tyr	Ile	Val	Arg	Glu	Val	Leu	Leu	Lys	Tyr		
		675					680					685					
Thr	Ala	Asp	Pro	Asp	Gln	His	Lys	Phe	Leu	Leu	Phe	Lys	Lys	Pro	Val		
	690					695					700						
Met	Asp	Leu	Ile	Ala	Lys	Ile	Val	Thr	His	Tyr	Ala	Val	Ile	His	Ser		
705					710					715					720		
Ala	Ala	Asp	Asn	Gly	Gly	Val	Cys	Leu	Ala	Phe	Pro	Arg	Asp	Pro	Pro		
			725						730					735			
Phe	Ile	Val	Glu	Asn	Asp	Thr	Ser	Leu	Arg	Tyr	Tyr	Thr	Leu	Thr	Asp		
			740					745					750				
Thr	Pro	Gln	Ser	Ile	Leu	Asn	Gly	Asp	Asn	Val	Ala	Glu	Asn	Leu	Lys		
		755					760					765					
Ser	Ala	Thr	Ser	Val	Ala	Ser	Ser	Pro	Ser	Ser	Ser	Ser	Arg	Tyr	Ser		
	770					775					780						
Ser	Glu	Thr	Pro	Ile	Arg	Val	Val	Asn	Leu	Pro	Val	Pro	Thr	Gly	Arg		
785					790					795					800		
Phe	Leu	Lys	Met	Asn	Lys	Asp	Leu	Glu	Leu	Phe	Ile	Asn	Val	Pro	Leu		
				805					810					815			
Ile	Ser	Ser	Lys	Glu	Gln	Lys	Gln	Gln	Gln	Gln	Gln	Thr	Thr	Ala	Thr		
			820					825					830				
Ala	Pro	Phe	Ser	Ser	Glu	Thr	Ile	Ser	Lys	Ser	Phe	Leu	Asn	Tyr	Val		
		835					840				845						
Pro	Pro	Lys	Ser	Leu	Thr	Arg	Asn	Val	Thr	Tyr	Gly	Gln	Asn	Ile	Ala		
	850					855					860						
Glu	Asp	Gly	Phe	Leu	Gly	Leu	Lys	Asn	Lys	Gly	Glu	Leu	Val	Ser	Tyr		
865					870					875							

Asp Ile Phe Pro Ser Lys Val Gly Thr Val Ala Gly Thr Gly Phe Glu  
 1010 1015 1020  
 Phe Ile Trp Lys Val Leu Gln Tyr Asp Thr Gly Leu Pro Thr Thr Leu  
 1025 1030 1035 1040  
 Glu Arg Leu Ser Pro Lys Ile Pro Ser Val Pro Ile Ser Gly Glu Asp  
 1045 1050 1055  
 Ser Lys Met Glu Val Ile Ala Glu Ser Gly Lys Gly Val Gln Asn Ile  
 1060 1065 1070  
 Ile Ala Ile Ala Ala Asp Gln Leu Arg Gly Ser Asn Asn Ile Val Gly  
 1075 1080 1085  
 Gly Gly Thr Arg Arg Ala Ile Gln Gln Gln Gln Gln Gln Gln Gln  
 1090 1095 1100  
 Glu Thr Gln Ala Val Val Pro Val Asn Val Pro Ala Arg Phe Glu Pro  
 1105 1110 1115 1120  
 Thr Phe Thr Glu Ile Glu Leu Phe Leu Gln Asn Lys Phe Arg Asn Val  
 1125 1130 1135  
 Ile Ala Thr Ile Ile Ser Arg Met Met Met Leu Val Ser Asn Glu Glu  
 1140 1145 1150  
 Met Lys Ile Ile Lys Glu Val Cys Glu His Val Ser His Ile Met Val  
 1155 1160 1165  
 Asp Gly Val Asp Pro Arg Lys Ala Ile Glu Glu Ile Arg Ile Thr Ala  
 1170 1175 1180  
 Glu Gln Asn Gly Ile Thr Ile Asp Thr Gly Asn Glu Gly Tyr Gly Ser  
 1185 1190 1195 1200  
 Leu Arg Tyr Ala Ser Ser Gly Arg Leu Phe Ile Asn Asp Glu Ala Ser  
 1205 1210 1215  
 Glu Glu Ala Ala Ala Ala Ile Gly Gly Gly Gly Ala Leu Gly Thr Gly  
 1220 1225 1230  
 Arg Arg Val Pro Val Glu Leu Arg Ser Ile Leu Asp Lys Leu Asn Thr  
 1235 1240 1245  
 Ile Gly Ser Thr Thr Gln Gln Gln Gln Gln Gln Arg Gln Gln Arg  
 1250 1255 1260  
 Gln Ala Asn Asn Asn Asn Thr Val Pro Glu Asp Ile Lys Val His Asn  
 1265 1270 1275 1280  
 Glu Gln Met Gln Lys Ile Arg Asp Ser Ser Leu Phe Thr Ser Lys Leu  
 1285 1290 1295  
 Leu Asn Tyr Ile Arg Asp Asp Gly Arg Lys Asp Arg Ile Lys Thr Asn  
 1300 1305 1310  
 Ile Ser Glu Thr Leu Lys Lys Tyr Ser Arg Ile Pro Ser Tyr Phe Ile  
 1315 1320 1325  
 Ala Ser Lys Ala Gln Lys Pro Ile Pro Trp Lys His Thr Lys Asp Asn  
 1330 1335 1340  
 Ile Asn Leu Asn Lys Ile Pro Glu Asp Leu Asn Phe Ser Pro Ala Gln  
 1345 1350 1355 1360  
 Asn Leu Phe Val Pro Val Asn Pro Arg His Ile Leu Thr Asp Met Gln  
 1365 1370 1375  
 Trp Leu Asn Cys Ile Ser Ile Ile Glu Thr Ala Thr Arg Asp Ser Ala  
 1380 1385 1390  
 Ile Val Met Gln Ser Phe Gln Glu Gln Ala Asp Lys Thr Thr Thr Gln  
 1395 1400 1405  
 Leu Glu Glu Leu Leu Ser Gln Trp Asn Asn Ile Val Ser Gln Val Thr  
 1410 1415 1420  
 Asp Glu Lys Ser Pro Ala Tyr Val Ser Ser Val Lys Leu Glu Trp Leu  
 1425 1430 1435 1440  
 Asn Asn Glu Ala Ser Arg Ile Ala Ala Ile Arg Glu Asn Ser Glu Lys  
 1445 1450 1455  
 Ser Lys Ile Val Met Gly Val Gln Gly Lys Ile Val Asn Ile Asp Glu  
 1460 1465 1470  
 Leu Gly Ile Val Ala Val Ala Arg Ser Ile Val Asp Val Asp Phe Tyr  
 1475 1480 1485  
 Ile Lys Met Pro Asn Val Trp Ala Ser Arg Asp Trp Lys Asn Leu Ile

WO 01/38351

PCT/US00/28888

327

1490	1495	1500
Tyr Tyr Ala Val Asn Ile Ala Ala Thr Pro Leu Ile Asn Asn Ile Ser		
1505	1510	1515
Arg Gly Ile Met Ala Ala Ser Gln Thr Ser Val Leu Tyr Asp Ser Ser		1520
	1525	1530
Leu Ala Leu Ile Ala Ala Glu Gln Ala Thr Arg Asn Ile Thr Met		1535
	1540	1550

<210> 236  
 <211> 669  
 <212> DNA  
 <213> SHRIMP

<400> 236  
 atggaatgga taaaccaacg gacaagtaga gaggatcttt tcaacacgta tacagggaat 60  
 gcagtaatac gttcggcagc taagcaagca ctggctattg aaaaacacgc agcagaaaga 120  
 agaggagaaa aggcattggac gacttcagca gcagcagcag cttcttctaa ttttaataat 180  
 gtacaacaag attatactga tgatgatatt acacaagtgt ctattgcaaa cagtgttttg 240  
 aataaccctt ttttaaagag atatgcaaaa cttatagata atttagcaat atcttcttta 300  
 cctcctgata tagaggatga tgtcattata cacactagag atgcctccaa ctctacagtc 360  
 agagtagatg gagccaatat ctatttcgcc ataattgacg gtgatttatg tgtataccct 420  
 aaacaatata tatctgataa agtgctgtgt ggttctctca accgggaaaa ggcactgttc 480  
 tataatagct ccaagaataa gtggacgtat ggatgtaacc taaactttga tatcggtgac 540  
 gctgccatca tgaacacccc cgactacaag gaagagacta catctacaaa acatatacgt 600  
 aaaatattgg gtatcggagc atcggaaaaa ctgaacatta cccactatit aaactacttt 660  
 atccaataa 669

<210> 237  
 <211> 218  
 <212> PRT  
 <213> SHRIMP

<400> 237  
 Met Glu Trp Ile Asn Gln Arg Thr Ser Arg Glu Asp Leu Phe Asn Thr  
 1 5 10 15  
 Tyr Thr Gly Asn Ala Val Ile Arg Ser Ala Ala Lys Gln Ala Ile Glu  
 20 25 30  
 Lys His Ala Ala Glu Arg Arg Gly Glu Lys Ala Trp Thr Thr Ser Ala  
 35 40 45  
 Ala Ala Ala Ala Ser Ser Asn Phe Asn Asn Val Gln Gln Asp Tyr Thr  
 50 55 60  
 Asp Asp Asp Ile Thr Gln Val Ser Ile Ala Asn Ser Val Leu Asn Asn  
 65 70 75 80  
 Pro Phe Leu Lys Arg Tyr Ala Lys Leu Ile Asp Asn Leu Ala Ile Ser  
 85 90 95  
 Ser Leu Pro Pro Asp Ile Glu Asp Asp Val Ile Ile His Thr Arg Asp  
 100 105 110  
 Asn Ser Thr Val Arg Val Asp Gly Ala Asn Ile Tyr Phe Ala Ile Ile  
 115 120 125  
 Asp Gly Asp Leu Cys Val Tyr Pro Lys Gln Tyr Ile Ser Asp Lys Val  
 130 135 140  
 Leu Cys Gly Ser Leu Asn Arg Glu Lys Ala Leu Phe Tyr Asn Ser Ser  
 145 150 155 160  
 Lys Asn Lys Trp Thr Tyr Gly Cys Asn Leu Asn Phe Asp Ile Val Asp  
 165 170 175  
 Ala Ala Ile Met Lys His Pro Asp Tyr Lys Glu Glu Thr Thr Ser Thr  
 180 185 190  
 Lys His Ile Arg Lys Ile Leu Gly Ile Gly Ala Ser Glu Lys Leu Asn  
 195 200 205  
 Ile Thr His Tyr Leu Asn Tyr Phe Ile Gln

210

215

<210> 238  
<211> 6948  
<212> DNA  
<213> SHRIMP

&lt;400&gt; 238

atgagcgata	cagggcagat	ggaagaaaat	aggcctgcta	cccagaaaag	gagacctgga	60
gatgaagaag	aggaagaaac	tggtagtagt	aatgttccat	attatgccaa	ctttggcgat	120
gacgccacgt	actccatgta	cactggagaa	ggaaaaaggg	gtaaatTTgt	attagagcca	180
cctaaagaaa	gaagtgtaca	aaggggtgca	aaaccaccta	aagaaaagga	ggaaaggga	240
caacgttcta	atgttcggac	acggagacct	ggtcaagagt	ttgaacagaa	agtgtacaa	300
gatcgatcgc	gagaacggtc	agaaaaactt	gggcaaaatt	tggcagagaa	aggattgcaa	360
gaacggcaaa	agaaatatac	tccaaaggta	gcacaaacaa	tgacaaaaaa	aataatcagg	420
tttcgtgaag	gaggaagaaa	attcaaggcg	ccgcaacagc	agacatctga	caaagggtgca	480
gcaaccaatg	ttcttgaaaag	ggaagaaatt	gagatggctg	cagaaagaga	acaaccagta	540
gaaattacag	gagatactat	attaggtggg	ctaggagaag	aagatgacga	agatatggga	600
gaggatgaat	taactataca	acattcatct	atggctgtat	cacaacccgt	tcaacaaatc	660
gttgtcagtt	ctcctatacc	gccaaagccc	actaggcccc	ctcctgatat	tcccatataa	720
gaagatatag	tggggaaaaa	tattagccag	ttaccacat	taccacttga	tgattatgag	780
gacgaagaag	acgaacattt	gtacgaagaa	gtgaatgatt	tcttagtggc	accaccaaca	840
gcagcagcag	cagcttccac	aagacctccc	aggcctaata	ttcctcctcc	acctcctcct	900
gttgttgctg	ttgcagacga	aaccttgaa	aacttggtt	caattgcagc	cttggaagaa	960
gagggccgag	aacaaagagc	ggcgcagtt	gaaaggga	gagaagtaga	ggaacaaaga	1020
gcggccgctg	ctgctgctgc	tgctgctgct	gccgcccaac	gggaagcaga	cgaaaaaagg	1080
gaaagagaag	cagaggaaca	aagagcggcc	gctgctgctg	ctgctgccgc	tgctgcccaa	1140
cggaagcag	acgaaaaaaa	ggaaagagaa	gtagaggaac	aaagagcggc	cgctgctgct	1200
gctgctgccg	ctgctgcccc	acgggaagca	gacgaaaaaa	gggaagaga	agtagaggaa	1260
caaagagcgg	ccgctgctgc	tgaaagggaa	atacttgccc	aacaacttca	agaaatgaaa	1320
gaacaaatgc	agataaagga	agaggagagg	gaaaggaac	tagcagataa	ggaggaagaa	1380
aaacgtcgag	aactagcagc	caaggaggaa	gaaaagcgtc	aagaaatatt	agctaaagaa	1440
gagcaacttg	aaaaattgaa	tttccagttg	ggtacagaaa	tcacgtccaa	aagagcactc	1500
gaacaaatgt	tagaagaaga	gaaggcctca	cgctcacggt	ccgcagccag	tgacaggtta	1560
gcgatccaag	caatagaata	tgaggatgaa	cttctcagc	cagtcgaacc	tcaaggacag	1620
ttagttccta	tgatacggg	tttgtacgga	aaaatgtacg	atctcaataa	gaaattagaa	1680
gtacagaata	atacattaac	ttctgcattt	gaagacgtga	acaaaacaaa	cgaacagaac	1740
caattgggtg	ctcaatccct	tgaaaaatcc	gctaaagcca	ttgaaaaatt	aactagtcaa	1800
aaacatcttc	ctgtggatga	tcctgctttt	atgcagagaa	taataacaga	gagggatttt	1860
tctttaaaga	atctgggaaa	tgtttacaaa	agagttctcg	gggtctattt	tacattaaaa	1920
agggaccttt	ttaaatcgaa	ggcatttaatt	acagataaag	aatcaaggga	tctggagggtg	1980
cgtctaacag	atgtatcgac	agatctcagg	gctaattgatc	tcaatacaat	actggaaagg	2040
ttggatgtat	ccgttaacat	acgctctggg	ggaacattat	acactaaatt	tacagaggca	2100
gacacggcat	tagcagatca	agttccttcg	aggattgaaa	taagtaacag	atcaagatct	2160
gccttattgc	cattttcatc	tgtaggtttg	gataactaatt	ttactaatag	ttccgacaag	2220
tacaatgaaa	tagtgaacca	actaagcagt	ataaatgagg	ctatgaatat	tttgaaagaa	2280
aatattgtcc	caacattgaa	ccaaatcaaa	attgatgtca	ccaatctatt	aacagtttca	2340
agctctcgtc	aatatgctat	tgaagaaagg	gtgtattctg	atgtgtcccc	aatggattct	2400
tgataaagaa	taattcctcg	tataatgaac	agtaaaatat	ccccttattt	taaaggcgat	2460
tggacggatg	aaagacaacg	ctctatttgc	gacagtattt	cctctcagat	aaaatcaaac	2520
gataaaatta	aagagagtgt	tgctacacta	cacgatatca	atacaacctc	aagaatacgt	2580
agtaatcccc	tcctgcacaa	atcctcagtt	ttatcatctc	cagacttttt	aatgctgtt	2640
aacgacttta	gaaattttct	cgatatccaa	ggaggttctc	aatttactta	tgatgtcctt	2700
tcaggccaaa	atattgatga	cctttcactg	gcatacaaaa	ccactgaaaa	ggttacagaa	2760
ttgtgcctcg	aattttccat	aattttagac	gtatccata	aaaatgcttt	gagtttaaat	2820
ttgcctgcaa	ttacttacct	cgcaggggaa	actctatggt	aagaaaagtgg	ttcattggct	2880
gttgacatta	gacaagaaat	tggttaagaac	atatcagatt	ctagcgctga	acttagtcgc	2940
acactgtcag	aggcgttaca	aatttttcag	caacaacagc	aacaacaaca	gcaacaattc	3000
caacagcagc	tgttacaaca	acaacaggac	caacaaaatc	aacaacaatt	attacaacaa	3060
caaatagaag	aacaacaacg	ggttcaggaa	cagcagcaac	agcagcaaa	ggaccaacaa	3120

caacaggaac	aacagcaaag	ggaacaacag	cagcaacagc	agcaaaggga	acaacaacaa	3180
caaagggaac	aacaacagca	gcaacagcag	caacagagtg	accagtttcg	acaacaatta	3240
ttgcaacaac	agcaacaatt	tcagcaatta	ctacaacaac	aaggaagaag	aagagggggt	3300
gacgatggtg	atgaagaaag	agaggaaaga	gaagaagggg	ctgaaaagga	tgatttgttg	3360
cgtaagggtg	cagaatcagt	agcgacaaaa	tatactgctg	acttgactac	cttattccaa	3420
cgagaagaaa	ataacttcca	atctaaaaata	gcatacagcaa	aattgggaac	ccttgtcttt	3480
gccacccctc	cttcacctat	catgaacttg	acaaaattga	gagaggaata	ttccacattc	3540
acaacccagt	gtttttcaaa	actaacagct	gaaaataata	gtattatgcg	tattttcccc	3600
gagaggattg	tagaagtatg	caagagtaag	aatctcaatt	taatgggaaa	atacttgtac	3660
attataacta	ccgcacaaac	agaaatggaa	gatcgagtga	agaatatatt	gtctgggtatt	3720
ttcaatcaaa	ttgaagagtt	ttcaaacaat	gtaaaacaac	aacaacaaca	acaagctgct	3780
tcagcttctt	ctactaatcc	tcctcctcct	tctactcctt	ctactactcc	tcctgtttaca	3840
agcatgcaag	tttgtgagtt	ggatgatcaa	cgtaccctag	aaaaggctgc	catagtagag	3900
gcaatttactc	tggccaatgc	tgtacttcaa	actacaaaat	ccgcttcagc	tccttccacg	3960
gcggtctgagc	gagaaattgc	tctaaagcta	gagaatggga	aaacatctat	ccgtatggaa	4020
aaagtggatc	taagttcagg	agctactggg	gtttccgacc	aacaaaaatg	gatcgacgaa	4080
agtacttcca	aacaagaatt	ggaagatttc	attgcagaag	aaaactttgt	agaaactgca	4140
cataatgaaa	tggatattgg	attaattttg	gatgccaaaga	agaacgatcc	gacccgtgat	4200
gccaatctta	ggctcgtgaa	acctcatgga	ataaatgtgc	agtctttccc	atattacgta	4260
ctccgcacat	ggctaggaga	aacagatata	ttggatgaag	atactgtaca	tcctgaatat	4320
ttccgccaat	acattgatcg	caattggaag	gtggaagaac	atgagcgtga	agatacatta	4380
aaggcactgg	gtgtttcttt	atcagatacg	ttggcacaca	tcaaggacta	ctattctccc	4440
agtgtcaaaa	atgatgcata	aaaatcagta	ccattttgcgt	tgaacactct	attgtacaac	4500
atatttgcta	tcgacggagg	aatgatttct	agcctttcaa	gaacagcctt	tattttaccgt	4560
aaatttttaa	ggcaatctat	gacagataaa	gaggttgctc	aaggacctgt	tcggtctcaa	4620
ctgtgtgaag	cgacaatagc	gtctcttttc	acggcatgta	gtaaccttct	tcgatcgtct	4680
cccttagccg	ataaagtaga	accacgcctt	caagaaaaat	tagcggccgc	tgctgctgta	4740
gacacgtcaa	ccggagacat	gtttcgtata	cgagtttgct	atctcatgta	caattttata	4800
gtggcttatg	tgaacctatg	caataatcgt	ataaactata	cgttaaatgt	attgagagcg	4860
tcgggtctgg	caaacaaaaa	agtcgtggcc	ggtaaaacaa	ctaaagggca	tacatcttct	4920
teccaccggg	ttggatctta	tgatgtcaca	tatgattttt	cagtattgta	caagattctt	4980
caactacaaa	aacagaaatat	ctctttactt	ttagagaagg	gtttcaatgc	atgggaatcg	5040
tgtgttgccg	ccatggcagc	cttcaactgcc	gacccttctc	tctccatctc	agatgccgac	5100
caatccatac	tcttcccact	agaaggggga	gagattgtta	ttgaaaaaca	tgaaaacgat	5160
gcagaaaaaa	atgtcogatat	ggttcaagaa	ttgtggaagg	aaactgcact	cacactcatg	5220
gcaaaggaac	taaattcata	ctacaactgg	ttcatataca	gtaaggatac	cgatatggaa	5280
aagttggcga	gagtggtcag	gatgattatc	ggtagtatta	aggctgttct	cagattaaca	5340
aataaagccg	agaagtttagt	agacactaat	gctctttctg	atattttcaa	gctacctgtg	5400
attccaattg	atgataccaa	aactctggca	ataaatattg	tggtgttcac	tttgaataat	5460
gtaattaaac	catggatggg	ttcgttcaag	caaattgtta	gacagaaaga	cgggggagtt	5520
tcttcagcct	atttctcggt	tcaaaatatc	caacaacaaa	aacatcaaca	aactgcttcc	5580
atttttagatg	catgggcttg	cgcgcccggg	aagttaacaa	aggcagcaca	cgtgtttatt	5640
tcaggatatg	aaaatcatat	caaattaaaa	aaagatgatc	ttttatgggg	tgcttcaatg	5700
aaattccctg	ccgacggagc	aggcactgtg	gtcgaaggat	gggcccaaca	atacaataac	5760
gaaagcgtat	tggaaagattt	taccgacttt	tcaattgaag	taaacgcacc	tgccctctgga	5820
ctcttaatac	cgccagatcc	tttactttct	tccatgttcg	gtaaaggaaa	tggtggaagc	5880
agcagcagca	gcagcaagga	taatacaatt	attggaaagg	gaggattaat	tttaaaccgc	5940
caagttgttg	gacaagaaca	agcaccacca	ataaacacgt	cgtcggatac	taaaaaata	6000
agacgtgatg	caaattatga	accaataata	gggacgcctt	atagtgtaat	taaggcaagt	6060
aaaggagtat	caatttcagt	actggatgat	ttcaatgagg	atagtccaga	agatttcgcc	6120
cttaaaactt	ccatcatcaa	tgatgccata	cgagaaatag	ggcaacgcat	gacttatata	6180
agacctatat	ttgatcatca	aacacagaaa	aatatacact	acagttcacc	taaaattatt	6240
ctcgaaggat	cagatttaaa	gaatggacaa	cgttcaggac	aatcttgggc	tccttcttca	6300
tcataccttga	ctctggcctc	cgattggaaat	ctaccttctc	tggagctttt	atatagagaa	6360
cttgccacaa	aacaagtaga	gaaggaagaa	gaagaaaaga	gcgaaaggga	agaagataaa	6420
ggacaaaaaac	ttaatgaaaa	attatcattt	gtcgtgaata	aagctatcgg	aactatccaa	6480
caacaacatc	aatattctga	aaggggagga	ggaatgaaga	ggtatcagca	acactctgct	6540
gatcaagcta	gtaatgggtg	catagatgat	atagaactta	tgaatagtaa	agatgctact	6600
tccatgagaa	aggcaaaact	ggcattagcc	gttactaata	aaattgcagc	agcagcagca	6660
agggatgggg	aaaattcatc	agctaaaccg	tcaaaacttg	gcaatagatt	ggatgaagca	6720
ataaaccttg	gagcactttt	attacgtaga	ggaggaggag	taagaggagg	acaaacaccc	6780

WO 01/38351

330

PCT/US00/28888

cagagttcaa tgctaacaat gttccgtcct ggacaaactg gtggcaatag tagttggtgg 6840  
 actactaata cacccttat tcaacgcaca actagtgttg ggaataattt agttgtgctt 6900  
 gtaccaaac tattggattc acaccctcct acatttaatt aggaataa 6948

&lt;210&gt; 239

&lt;211&gt; 2293

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 239

Met	Ser	Asp	Thr	Gly	Gln	Met	Glu	Glu	Asn	Arg	Pro	Ala	Thr	Gln	Lys
1				5					10					15	
Arg	Arg	Pro	Gly	Asp	Glu	Glu	Glu	Glu	Thr	Gly	Ser	Ser	Ser	Asn	Val
			20					25					30		
Pro	Tyr	Tyr	Ala	Asn	Phe	Gly	Asp	Asp	Ala	Thr	Tyr	Ser	Met	Tyr	Thr
		35					40					45			
Gly	Glu	Gly	Lys	Arg	Gly	Lys	Phe	Val	Leu	Glu	Pro	Pro	Lys	Glu	Arg
		50				55					60				
Ser	Val	Gln	Arg	Val	Gln	Lys	Pro	Pro	Lys	Glu	Lys	Glu	Glu	Arg	Glu
65					70					75					80
Gln	Arg	Ser	Asn	Val	Arg	Thr	Arg	Arg	Pro	Gly	Gln	Glu	Phe	Glu	Gln
			85						90					95	
Lys	Val	Leu	Gln	Asp	Arg	Ser	Arg	Glu	Arg	Ser	Glu	Lys	Leu	Gly	Gln
			100					105					110		
Asn	Leu	Ala	Glu	Lys	Gly	Leu	Gln	Glu	Arg	Gln	Lys	Lys	Tyr	Thr	Pro
		115					120					125			
Lys	Val	Ala	Gln	Thr	Met	Thr	Lys	Lys	Ile	Ile	Arg	Phe	Arg	Glu	Gly
		130				135					140				
Gly	Arg	Lys	Phe	Lys	Ala	Pro	Gln	Gln	Gln	Thr	Ser	Asp	Lys	Gly	Ala
145					150					155					160
Ala	Thr	Asn	Val	Leu	Glu	Arg	Glu	Glu	Ile	Glu	Met	Ala	Ala	Glu	Arg
				165					170						175
Glu	Gln	Pro	Val	Glu	Ile	Thr	Gly	Asp	Thr	Ile	Leu	Gly	Gly	Leu	Gly
			180					185					190		
Glu	Glu	Asp	Asp	Glu	Asp	Met	Gly	Glu	Asp	Glu	Leu	Thr	Ile	Gln	His
		195					200					205			
Ser	Ser	Met	Ala	Val	Ser	Gln	Pro	Val	Gln	Gln	Ile	Val	Val	Ser	Ser
		210				215						220			
Pro	Ile	Pro	Pro	Lys	Pro	Trp	Ala	Pro	Asp	Ile	Pro	Ile	Gln	Glu	Asp
225					230					235					240
Ile	Val	Gly	Lys	Asn	Ile	Ser	Gln	Leu	Pro	Pro	Leu	Pro	Leu	Asp	Asp
				245					250					255	
Tyr	Glu	Asp	Glu	Glu	Asp	Glu	His	Leu	Tyr	Glu	Glu	Val	Asn	Asp	Phe
			260					265					270		
Leu	Val	Ala	Pro	Pro	Thr	Ala	Ala	Ala	Ala	Ala	Ser	Trp	Pro	Arg	Pro
			275				280					285			
Asn	Ile	Pro	Pro	Pro	Pro	Pro	Pro	Val	Val	Ala	Val	Ala	Asp	Glu	Thr
	290					295						300			
Leu	Lys	Asn	Leu	Ala	Ser	Ile	Ala	Ala	Leu	Glu	Lys	Glu	Ala	Glu	Glu
305					310					315					320
Gln	Arg	Ala	Ala	Ala	Val	Glu	Arg	Glu	Arg	Glu	Val	Glu	Glu	Gln	Arg
				325					330					335	
Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Gln	Arg	Glu
			340					345					350		Ala
Asp	Glu	Lys	Arg	Glu	Arg	Glu	Ala	Glu	Glu	Gln	Arg	Ala	Ala	Ala	Ala
		355					360					365			
Ala	Ala	Ala	Ala	Ala	Ala	Ala	Gln	Arg	Glu	Ala	Asp	Glu	Lys	Lys	Glu
		370				375					380				
Arg	Glu	Val	Glu	Glu	Gln	Arg	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Ala
385					390					395					400
Ala	Ala	Gln	Arg	Glu	Ala	Asp	Glu	Lys	Arg	Glu	Arg	Glu	Val	Glu	Glu

				405						410					415	
Gln	Arg	Ala	Ala	Ala	Ala	Ala	Glu	Arg	Glu	Ile	Leu	Ala	Gln	Gln	Leu	
			420					425					430			
Gln	Glu	Met	Lys	Glu	Gln	Met	Arg	Ile	Lys	Glu	Glu	Glu	Arg	Arg	Lys	
		435					440					445				
Glu	Leu	Ala	Asp	Lys	Glu	Glu	Glu	Lys	Arg	Arg	Glu	Leu	Ala	Ala	Lys	
	450					455					460					
Glu	Glu	Glu	Lys	Arg	Gln	Glu	Ile	Leu	Ala	Lys	Glu	Glu	Gln	Leu	Glu	
465					470				475						480	
Lys	Leu	Asn	Phe	Gln	Leu	Gly	Thr	Glu	Ile	Thr	Ser	Lys	Arg	Ala	Leu	
			485					490					495			
Glu	Gln	Met	Leu	Glu	Glu	Glu	Lys	Ala	Ser	Arg	Ser	Arg	Ser	Ala	Ala	
			500					505					510			
Ser	Ala	Gln	Leu	Ala	Ile	Gln	Ala	Ile	Glu	Tyr	Glu	Asp	Glu	Leu	Pro	
		515					520					525				
Gln	Ala	Val	Glu	Pro	Gln	Gly	Gln	Leu	Val	Pro	Met	Asp	Thr	Asp	Leu	
	530				535						540					
Tyr	Gly	Lys	Met	Tyr	Asp	Leu	Asn	Lys	Lys	Leu	Glu	Val	Gln	Asn	Asn	
545				550						555					560	
Thr	Leu	Thr	Ser	Ala	Phe	Glu	Asp	Val	Asn	Lys	Thr	Asn	Glu	Gln	Asn	
			565					570					575			
Gln	Leu	Val	Ala	Gln	Ser	Leu	Glu	Lys	Ser	Ala	Lys	Ala	Ile	Glu	Lys	
			580					585					590			
Leu	Thr	Ser	Gln	Lys	His	Leu	Pro	Val	Asp	Asp	Pro	Ala	Phe	Met	Gln	
		595					600					605				
Arg	Ile	Ile	Thr	Glu	Arg	Asp	Phe	Ser	Leu	Lys	Asn	Leu	Gly	Asn	Val	
	610				615						620					
Tyr	Lys	Arg	Val	Leu	Gly	Val	Tyr	Phe	Thr	Leu	Lys	Arg	Asp	Leu	Phe	
625				630						635				640		
Lys	Ser	Lys	Ala	Leu	Ile	Thr	Asp	Lys	Glu	Ser	Arg	Asp	Leu	Glu	Val	
			645						650				655			
Arg	Leu	Thr	Asp	Val	Ser	Thr	Asp	Leu	Arg	Ala	Asn	Asp	Leu	Asn	Thr	
			660					665					670			
Ile	Arg	Leu	Asp	Val	Ser	Val	Asn	Ile	Arg	Ser	Gly	Gly	Thr	Leu	Tyr	
		675					680					685				
Thr	Lys	Phe	Thr	Glu	Ala	Asp	Thr	Ala	Asp	Gln	Val	Pro	Ser	Arg	Ile	
	690				695						700					
Glu	Ile	Ser	Asn	Arg	Ser	Arg	Ser	Ala	Leu	Leu	Pro	Phe	Ser	Ser	Ala	
705				710					715						720	
Gly	Leu	Asp	Thr	Asn	Phe	Thr	Asn	Ser	Ser	Asp	Lys	Tyr	Asn	Glu	Ile	
			725						730				735			
Val	Asn	Gln	Leu	Ser	Ser	Ile	Asn	Glu	Ala	Met	Asn	Ile	Leu	Lys	Glu	
			740													

Ile Asp Asp Leu Ser Leu Ala Ser Lys Thr Thr Glu Lys Val Thr Glu  
 900 905 910  
 Leu Cys Leu Glu Leu Ser Ile Ile Leu Asp Val Ile His Lys Asn Ala  
 915 920 925  
 Leu Ser Leu Asn Leu Pro Ala Ile Thr Tyr Pro Ala Gly Glu Thr Ser  
 930 935 940  
 Met Glu Glu Ser Gly Ser Leu Ala Val Asp Ile Arg Gln Glu Ile Gly  
 945 950 955 960  
 Lys Asn Ile Ser Asp Ser Ser Ala Glu Leu Ser Arg Thr Leu Ser Glu  
 965 970 975  
 Ala Leu Gln Ile Phe Gln Gln Gln Gln Gln Gln Gln Gln Gln Phe  
 980 985 990  
 Gln Gln Gln Leu Leu Gln Gln Gln Gln Asp Gln Gln Asn Gln Gln Gln  
 995 1000 1005  
 Leu Leu Gln Gln Gln Ile Glu Glu Gln Gln Arg Val Gln Glu Gln Gln  
 1010 1015 1020  
 Gln Gln Gln Gln Arg Asp Gln Gln Gln Gln Glu Gln Gln Gln Arg Glu  
 1025 1030 1035 1040  
 Gln Gln Gln Gln Gln Gln Gln Arg Glu Gln Gln Gln Arg Glu Gln  
 1045 1050 1055  
 Gln Gln Gln Gln Gln Gln Gln Gln Ser Asp Gln Phe Arg Gln Gln Leu  
 1060 1065 1070  
 Leu Gln Gln Gln Gln Gln Phe Gln Gln Leu Leu Gln Gln Gln Gly Arg  
 1075 1080 1085  
 Arg Arg Gly Gly Asp Asp Gly Asp Glu Glu Arg Glu Glu Arg Glu Glu  
 1090 1095 1100  
 Gly Ala Glu Lys Asp Asp Cys Val Arg Lys Val Ala Glu Ser Val Ala  
 1105 1110 1115 1120  
 Thr Lys Tyr Thr Ala Asp Leu Thr Thr Leu Phe Gln Arg Glu Glu Asn  
 1125 1130 1135  
 Asn Phe Gln Ser Lys Ile Ala Ser Ala Lys Leu Gly Thr Leu Val Phe  
 1140 1145 1150  
 Ala Thr Pro Pro Ser Pro Ile Met Asn Leu Thr Lys Leu Arg Glu Glu  
 1155 1160 1165  
 Tyr Ser Thr Phe Thr Thr Gln Cys Phe Ser Lys Leu Thr Ala Glu Asn  
 1170 1175 1180  
 Asn Ser Ile Met Arg Ile Phe Pro Glu Arg Ile Val Glu Val Cys Lys  
 1185 1190 1195 1200  
 Ser Lys Asn Leu Asn Leu Met Gly Lys Tyr Leu Tyr Ile Ile Thr Thr  
 1205 1210 1215  
 Ala Gln Thr Glu Met Glu Asp Arg Val Lys Asn Ile Leu Ser Gly Ile  
 1220 1225 1230  
 Phe Asn Gln Ile Glu Glu Phe Ser Asn Asn Val Lys Gln Gln Gln Gln  
 1235 1240 1245  
 Gln Gln Ala Ala Ser Ala Ser Ser Thr Asn Pro Pro Pro Pro Ser Thr  
 1250 1255 1260  
 Pro Ser Thr Thr Pro Pro Val Thr Ser Met Gln Val Cys Glu Leu Asp  
 1265 1270 1275 1280  
 Asp Gln Arg Thr Leu Glu Lys Ala Ala Ile Val Glu Ala Ile Thr Leu  
 1285 1290 1295  
 Ala Asn Ala Val Leu Gln Thr Thr Lys Ser Ala Ser Ala Pro Ser Thr  
 1300 1305 1310  
 Ala Ala Glu Arg Glu Ile Ala Leu Lys Leu Glu Asn Gly Lys Thr Ser  
 1315 1320 1325  
 Ile Arg Met Glu Lys Val Asp Leu Ser Ser Gly Ala Thr Gly Val Ser  
 1330 1335 1340  
 Asp Gln Gln Lys Trp Ile Asp Glu Ser Thr Ser Lys Gln Glu Leu Glu  
 1345 1350 1355 1360  
 Asp Phe Ile Ala Glu Glu Asn Phe Val Glu Thr Ala His Asn Glu Met  
 1365 1370 1375  
 Asp Ile Gly Leu Ile Leu Asp Ala Lys Lys Asn Asp Pro Thr Arg Asp



										1380						1385						1390		
Ala	Asn	Leu	Arg	Leu	Val	Lys	Pro	His	Gly	Ile	Asn	Val	Gln	Ser	Phe									
										1395			1400			1405								
Pro	Tyr	Tyr	Val	Leu	Arg	Thr	Trp	Leu	Gly	Glu	Thr	Asp	Ile	Leu	Asp									
										1410			1415			1420								
Glu	Asp	Thr	Val	His	Pro	Glu	Tyr	Phe	Arg	Gln	Tyr	Ile	Asp	Arg	Asn									
										1425			1430			1435			1440					
Trp	Lys	Val	Glu	Glu	His	Glu	Arg	Glu	Asp	Thr	Leu	Lys	Ala	Leu	Gly									
										1445			1450			1455								
Val	Ser	Leu	Ser	Asp	Thr	Leu	Ala	His	Ile	Lys	Asp	Tyr	Tyr	Ser	Pro									
										1460			1465			1470								
Ser	Val	Lys	Asn	Asp	Ala	Ser	Lys	Ser	Val	Pro	Phe	Ala	Leu	Asn	Thr									
										1475			1480			1485								
Leu	Leu	Tyr	Asn	Ile	Phe	Ala	Ile	Asp	Gly	Gly	Met	Ile	Ser	Ser	Leu									
										1490			1495			1500								
Ser	Arg	Thr	Ala	Phe	Ile	Tyr	Arg	Lys	Phe	Leu	Arg	Gln	Ser	Met	Thr									
										1505			1510			1515			1520					
Asp	Lys	Glu	Val	Ala	Gln	Gly	Pro	Val	Arg	Ser	Gln	Leu	Cys	Glu	Ala									
										1525			1530			1535								
Thr	Ile	Ala	Ser	Leu	Phe	Thr	Ala	Cys	Ser	Asn	Leu	Leu	Arg	Ser	Ser									
										1540			1545			1550								
Pro	Leu	Ala	Asp	Lys	Val	Glu	Pro	Arg	Leu	Gln	Glu	Lys	Leu	Ala	Ala									
										1555			1560			1565								
Ala	Ala	Ala	Val	Asp	Thr	Ser	Thr	Gly	Asp	Met	Phe	Arg	Ile	Arg	Val									
										1570			1575			1580								
Cys	His	Leu	Met	Tyr	Asn	Phe	Ile	Val	Ala	Tyr	Val	Asn	Leu	Cys	Asn									
										1585			1590			1595			1600					
Asn	Arg	Ile	Asn	Tyr	Thr	Leu	Asn	Val	Leu	Arg	Ala	Ser	Gly	Leu	Ala									
										1605			1610			1615								
Asn	Lys	Lys	Val	Val	Ala	Gly	Lys	Thr	Thr	Lys	Gly	His	Thr	Ser	Ser									
										1620			1625			1630								
Ser	His	Arg	Phe	Gly	Ser	Tyr	Asp	Val	Thr	Tyr	Asp	Phe	Ser	Val	Leu									
										1635			1640			1645								
Tyr	Lys	Ile	Leu	Gln	Leu	Gln	Lys	Gln	Asn	Ile	Ser	Leu	Leu	Leu	Glu									
										1650			1655			1660								
Lys	Gly	Phe	Asn	Ala	Trp	Glu	Ser	Cys	Val	Ala	Ala	Met	Ala	Ala	Phe									
										1665			1670			1675			1680					
Thr	Ala	Asp	Pro	Ser	Leu	Ser	Ile	Ser	Asp	Ala	Asp	Gln	Ser	Ile	Leu									
										1685			1690			1695								
Phe	Pro	Leu	Glu	Gly	Gly	Glu	Ile	Val	Ile	Glu	Lys	His	Glu	Asn	Asp									
										1700			1705			1710								
Ala	Glu	Lys	Asn	Val	Asp	Met	Val	Gln	Glu	Leu	Trp	Lys	Glu	Thr	Ala									
										1715			1720			1725								
Leu	Thr	Leu	Met	Ala	Lys	Glu	Leu	Asn	Ser	Tyr	Tyr	Asn	Trp	Phe	Ile									
										1730			1735			1740								
Tyr	Ser	Lys	Asp	Thr	Asp	Met	Glu	Lys	Leu	Ala	Arg	Val	Cys	Arg	Met									
										1745			1750			1755								
Ile	Ile	Gly	Ile	Val	Lys	Ala	Val	Leu	Arg	Leu	Thr	Asn	Lys	Ala	Glu									
										1765			1770			1775								

Ser Gly Tyr Glu Asn His Ile Lys Leu Lys Lys Asp Asp Leu Leu Trp  
 1875 1880 1885  
 Gly Ala Ser Met Lys Phe Pro Ala Asp Gly Arg Gly Thr Val Val Glu  
 1890 1895 1900  
 Gly Trp Ala Gln Gln Tyr Asn Asn Glu Ser Val Leu Glu Asp Phe Thr  
 1905 1910 1915 1920  
 Asp Phe Ser Ile Glu Val Asn Ala Pro Ala Ser Gly Leu Leu Ile Pro  
 1925 1930 1935  
 Pro Asp Pro Leu Leu Ser Ser Met Phe Gly Lys Gly Asn Gly Gly Ser  
 1940 1945 1950  
 Ser Ser Ser Ser Ser Lys Asp Asn Thr Ile Ile Gly Lys Gly Gly Leu  
 1955 1960 1965  
 Ile Leu Asn Arg Gln Val Val Gly Gln Glu Gln Ala Pro Pro Ile Asn  
 1970 1975 1980  
 Thr Ser Ser Asp Thr Lys Lys Ile Arg Arg Asp Ala Asn Ile Glu Pro  
 1985 1990 1995 2000  
 Ile Ile Gly Thr Pro Tyr Ser Val Ile Lys Ala Ser Lys Gly Val Ser  
 2005 2010 2015  
 Ile Ser Val Leu Asp Asp Phe Asn Glu Asp Ser Pro Glu Asp Phe Ala  
 2020 2025 2030  
 Leu Lys Thr Ser Ile Ile Asn Asp Ala Ile Arg Glu Ile Gly Gln Arg  
 2035 2040 2045  
 Met Thr Tyr Trp Ile Phe Asp His Gln Thr Gln Lys Asn Ile His Tyr  
 2050 2055 2060  
 Ser Ser Pro Lys Ile Ile Gly Ser Asp Leu Lys Asn Gly Gln Arg Ser  
 2065 2070 2075 2080  
 Gly Gln Ser Trp Ala Pro Ser Ser Ser Ser Leu Thr Leu Ala Ser Asp  
 2085 2090 2095  
 Trp Asn Leu Pro Ser Leu Glu Leu Leu Tyr Arg Glu Leu Ala Thr Lys  
 2100 2105 2110  
 Gln Val Glu Lys Glu Glu Glu Glu Lys Ser Glu Glu Asp Lys Gly Gln  
 2115 2120 2125  
 Lys Leu Asn Glu Lys Leu Ser Phe Val Val Asn Lys Ala Ile Gly Thr  
 2130 2135 2140  
 Ile Gln Gln Gln His Gln Tyr Ser Gly Gly Gly Met Lys Arg Tyr Gln  
 2145 2150 2155 2160  
 Gln His Ser Ala Asp Gln Asn Gly Gly Ile Asp Asp Ile Glu Leu Met  
 2165 2170 2175  
 Asn Ser Lys Asp Ala Thr Ser Met Arg Lys Ala Lys Leu Ala Val Thr  
 2180 2185 2190  
 Asn Lys Ile Ala Ala Ala Ala Ala Arg Asp Gly Glu Asn Ser Ser Ala  
 2195 2200 2205  
 Lys Pro Ser Asn Phe Gly Asn Arg Leu Asp Glu Ala Ile Asn Pro Gly  
 2210 2215 2220  
 Ala Leu Leu Leu Arg Arg Gly Gly Gly Val Arg Gly Gly Gln Thr Pro  
 2225 2230 2235 2240  
 Gln Ser Ser Met Leu Thr Met Phe Arg Pro Gly Gln Thr Gly Gly Asn  
 2245 2250 2255  
 Ser Ser Trp Trp Thr Thr Asn Thr Pro Leu Ile Gln Arg Thr Thr Ser  
 2260 2265 2270  
 Val Gly Asn Asn Leu Val Val Leu Val Pro Asn Leu Leu Asp Ser His  
 2275 2280 2285  
 Pro Pro Thr Phe Asn  
 2290

<210> 240  
 <211> 4311  
 <212> DNA  
 <213> SHRIMP

&lt;400&gt; 240

atggattttg	aaggaactac	cagttctacc	cctcaaaaa	tgtcccagtt	gtattcatca	60
gtgaagaaag	ttgcagagca	ttcctttgcc	aatottcatg	acaaggctac	tcttgcatca	120
aagggttatta	aggacctgga	aggggagagg	aagaaaatgt	ctaccccaaa	gtcctcttct	180
gatggacaaa	aactggacaa	ggctatgttg	gacgatatta	tcaacgagta	tcaggccggt	240
aagagcactg	cagataattc	cattgaatcg	accatcaagg	aaattgaaaa	tgtacttgaa	300
agtgtgcgca	gaaccaagat	tgaaagtga	gccaaagaac	gtgtaacttc	cagcccagaa	360
aaagtgtttt	ctgtcagagga	tttagaaaac	tactccaagg	ggcgagtgtg	caaaggtctc	420
aagttaaaccg	ccaactgttc	aagaattgga	ggcaagtatg	cagtgtcaat	gagtatcaaa	480
aaacacaacg	tctcctcatt	tgagaacaac	aacaaccaag	ttttctctga	agaacccagg	540
gattgtttta	tgcttgaaac	aacctatcct	cttggtgggt	tcgaaacttc	tacagaagat	600
ggaaatacat	atgcagtttt	cttgactggg	gttgggctag	aaagatctct	acctaaatat	660
gtaccagttt	tcgacatgaa	tgcagggtatt	caaaccctaa	acatgactgg	tttgaggatg	720
gccaaagcttc	ctgtttctgtg	catgtttgga	cgtacagaat	atgacaactt	ggaagatttt	780
tacatcactt	caattgagac	gcagtccttt	gacgaagagg	aaaatgatgc	cagaatgagg	840
tgtcacaccg	aagatttgga	gaggaagaag	cgcatgaatg	acgcaccagc	gattacacct	900
catgtggccg	tgtacgacta	cagtggagac	gggaaagaac	aattgctcta	tatgataacc	960
gagtatgaaa	acacggctag	ttggtgcaac	gcaaacgggtg	tggtcacatc	tgacagtggg	1020
ttttctaaccg	aatgtgcaat	tagtgatatg	aatgacttgt	gctgttttgc	tgactgcatc	1080
gatgttactg	ttaataatga	agaacatgaa	gaacgttcta	tgaatattgt	ggtcgaatct	1140
gacaggcgctc	tttttgatgc	tagtccttcc	cccatcaaga	cggagaaga	tggagaaaaat	1200
tcacgctcat	cgtcttcttc	tccaacagtt	cctcctccta	caccatacga	aggtaacgca	1260
gttgtggagg	gggaggaaga	agaggaagaa	attgatgaag	acgaaagtag	caagtatgaa	1320
ggttcagaag	atgctcttgt	tatgaagaaa	ttagccaagc	tttctactat	gaaacaaatg	1380
agaagggtta	agaatgaacc	tgcactcaaa	attacttctg	ggggtacaa	tagtagcagt	1440
agtatcaata	acgaagatga	tggatgatga	gacgatgccg	ttgacgctac	tgcatattgc	1500
ccccaaactg	aagctacagt	gaaaaattcc	ttcatggccc	caaacgacga	gagaactgaa	1560
aatattttgt	atgaaactat	gcaaatttct	cttgctaaaa	tttgtaataa	tccatcatct	1620
atgagcagtt	accgtgtatt	caccaacaaa	ctccaagagt	gtttgaatac	catggacgat	1680
agtatccgctc	gccgtccaac	catttggtact	gaagaaagtc	aacaatttgc	taaggggtttg	1740
ttgtttgatg	aggttggtcac	atcaattgtg	gcacatcaga	tggctcaaga	tatttgcaag	1800
tctgaatatg	ttggagggaat	gtttaacgcc	acatttaacca	acattaaggg	taaatatgaa	1860
ggacaaaaga	agagtctgta	tggaaacaag	cacatttctt	cctcgtgctt	caaaaaccaac	1920
acggaatcta	atgtgaataa	tgcactatct	gcgtgggtga	aatcgaaact	ccattctggc	1980
acagtcatac	ctaacgtatt	ctccttcaaa	atggcatcag	aaaagccctc	aaaaatgaag	2040
cgcaagcgta	cctctagtgc	ttcatcatct	aacgatgaac	accaagaacc	atcaacaaaa	2100
atgatgaaaa	atgatgaagg	ggaaaagggt	gcacaagaat	catcatctcc	ttcttcatcg	2160
tctacaccag	aacaacaaca	acaagctggt	catgacaagg	aaactatcaa	tttaattccc	2220
ctcagtttca	taaaaaatgcc	acgcagtaat	gtcaattggc	cggcttcata	tttgtctgaa	2280
atattcggctc	aacgtctttg	tggactgtct	gatgcttcca	gcacatttaa	gagaatgtgc	2340
aagacttttg	aagatcttga	aaatgaaatc	atgaggagct	cattcactag	actgactaga	2400
tatgagaggg	aggtaactcg	cttgatgatg	aaatgcaggt	ctcaagctgt	agatattgag	2460
gaaaatgaaa	tggatgtttt	gtctcaccaa	ggggaattgt	ttgccgagtt	cttggaggac	2520
ccgatccgtt	actttgaaga	agtacttgga	aatattaaga	gttgagcct	agaaaacgtt	2580
aacaccctta	agcgcaaaaa	caagtatgca	aagggtactg	tgagcgtaaa	tgctattcgt	2640
aggacatatg	aagaatacca	tgcgttttagc	aagtttgtac	caatgttctt	gttcaatctg	2700
attaagagag	aattggaagg	agacaactat	acccatgacg	ttcacttttc	ttccacttgc	2760
ctgtggtacc	tgactgtaat	gaccaggaac	aggatttgcg	atgtgctcca	gtacatcaac	2820
aacaacaata	atgataacga	agaaaccgat	attgtggagg	aagaggagga	aggagaagga	2880
gaggaggata	aaatggaaga	aagtatggac	gtagaacaac	agaagcaagt	tcgcaaggga	2940
gggagaaaga	agggtaaaaa	attcaacagt	attggggatc	aagtcattag	aaaatttgtg	3000
aaaagtttgt	tgaaaaattc	gatggtagtt	tctattgcaa	ttaatagttt	gatctctgga	3060
ataagctgga	tgaacaagaa	aatccctccc	ggtttcttga	aggattctag	cacaatcaat	3120
acccttgatg	aggtctcaag	gtttgtgttt	agcgatgtca	aaatcaatag	gaaaatcaat	3180
ggaacagatg	ataaatatga	aactgttttt	ggagtcagta	cgcgtgtgga	ttcacatatt	3240
ttaggcccct	ttagtatccc	tgttgatttt	tcaagcgcag	gactagataa	ggcctcatgt	3300
ggcaaatgtg	acgttaaacac	catagacgga	aagggcattt	tgacaatttc	acccaaatat	3360
gattcattaa	acgatgagga	tgttgattct	actacaacag	acaagctaga	gaaggatatt	3420
ttgcatttgt	ctaagcatga	cacctttttc	aatattaata	agaataaggt	tcttccattc	3480
tataatattt	ctcctagctc	ttctctcact	gaaaagaaaa	agacaaaatt	caataggaag	3540
aagatctcat	ctggtatgag	caataataat	ggcatgtgtg	tacaaactcc	ttctagttca	3600

WO 01/38351

336

PCT/US00/28888

```

aattcagttct cttccgtctc gtctattgta gctccttcat cttctgttct ggctctatct 3660
tgctccctttt cttctacaaa gaaaaagagc atctggaacg agaacatggt tttgacatct 3720
aggaacatgt ggaggtgtgg atttgttgta ccacccaaac tttgcagttt tattgttaac 3780
catagacacg ctgtaaaact ttagactgaa actgcaccta aaacaaagt gtgttagaat 3840
attattgata ggaataggaa gattagattt aacggtctaa agaaggtatg caagagtgtt 3900
agcgcccttta ccggcgagtc tacatatattg ctcaataaga atatgactgc aacttcacct 3960
agtgatttga acctatgtat ttatacttca tctttaaatg acccattgta tacttgtaaa 4020
ttgacccatg aagagtacca ggacggaaat gctttggatg actatggtgc agtttttgta 4080
aactatacat ttaagagtat caaatcctgc tcgtccaaag atgaaaccgc tgacgacaat 4140
gctgctgctg ctgatgatga tggttctact acttctacct cttcttcaac tgatactgat 4200
gctgctgcaa tccaagactt tatgcatgta atgattaaga aaattgatgc catgaaagac 4260
attagaggaa agtacaagaa atctttggca aagaaaacaa agaagcatta a 4311

```

&lt;210&gt; 241

&lt;211&gt; 1430

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 241

```

Met Asp Phe Glu Gly Thr Thr Ser Ser Thr Pro Ser Lys Met Ser Gln
1      5      10      15
Lys Ser Val Lys Lys Val Ala Glu His Ser Phe Ala Asn Leu His Asp
20     25     30
Lys Ala Thr Leu Ala Ser Lys Val Ile Lys Asp Leu Glu Gly Glu Arg
35     40     45
Lys Lys Met Ser Thr Pro Lys Ser Ser Ser Asp Gly Gln Lys Leu Asp
50     55     60
Lys Ala Met Leu Asp Asp Ile Ile Asn Glu Tyr Gln Ala Val Lys Ser
65     70     75     80
Thr Ala Asp Asn Ser Ile Glu Ser Thr Ile Lys Glu Ile Glu Asn Val
85     90     95
Leu Glu Ser Val Arg Arg Thr Lys Ile Glu Ser Glu Ala Lys Asn Ser
100    105    110
Val Thr Ser Ser Pro Glu Lys Val Phe Ser Val Glu Asp Leu Glu Ile
115    120    125
Tyr Ser Lys Gly Arg Val Cys Lys Gly Leu Lys Leu Asn Ala Asn Cys
130    135    140
Ser Arg Ile Gly Gly Lys Tyr Ala Val Ser Met Ser Ile Lys Lys His
145    150    155    160
Asn Val Ser Ser Phe Glu Asn Asn Asn Asn Gln Val Phe Ser Glu Glu
165    170    175
Pro Arg Asp Cys Phe Met Leu Glu Thr Thr Tyr Pro Leu Val Gly Phe
180    185    190
Glu Thr Ser Thr Glu Asp Gly Asn Thr Tyr Ala Val Phe Leu Thr Gly
195    200    205
Val Gly Leu Glu Arg Ser Leu Pro Lys Tyr Val Pro Val Phe Asp Met
210    215    220
Asn Ala Gly Ile Gln Thr Leu Asn Met Thr Gly Leu Arg Met Ala Lys
225    230    235    240
Leu Pro Val Leu Cys Met Phe Gly Arg Thr Glu Tyr Asp Asn Leu Glu
245    250    255
Asp Phe Tyr Ile Thr Ser Ile Glu Thr Gln Ser Phe Asp Glu Glu Glu
260    265    270
Asn Asp Ala Arg Met Arg Cys His Thr Glu Asp Leu Glu Arg Lys Lys
275    280    285
Arg Met Asn Asp Ala Pro Ala Ile Thr Pro His Val Ala Val Tyr Asp
290    295    300
Tyr Ser Gly Asp Gly Lys Glu Gln Leu Leu Tyr Met Ile Thr Glu Tyr
305    310    315    320
Glu Asn Thr Ala Ser Trp Cys Asn Ala Asn Gly Val Val Thr Ser Asp
325    330    335

```

Ser	Gly	Phe	Ser	Asn	Glu	Cys	Ala	Ile	Ser	Asp	Met	Asn	Asp	Leu	Cys
			340					345					350		
Cys	Phe	Ala	Asp	Cys	Ile	Asp	Val	Thr	Val	Asn	Asn	Glu	Glu	His	Glu
		355					360					365			
Glu	Arg	Ser	Met	Asn	Ile	Val	Val	Glu	Ser	Asp	Arg	Arg	Leu	Phe	Asp
	370					375					380				
Asp	Ser	Pro	Ile	Lys	Thr	Glu	Glu	Asp	Gly	Glu	Asn	Ser	Ser	Ser	Ser
385					390					395					400
Ser	Ser	Ser	Pro	Thr	Val	Pro	Pro	Pro	Thr	Pro	Tyr	Glu	Gly	Asn	Ala
				405					410					415	
Val	Val	Glu	Gly	Glu	Glu	Glu	Glu	Glu	Glu	Ile	Asp	Glu	Asp	Glu	Ser
			420					425					430		
Ser	Lys	Tyr	Glu	Gly	Ser	Glu	Asp	Ala	Leu	Val	Met	Lys	Lys	Leu	Ala
		435					440					445			
Lys	Leu	Ser	Thr	Met	Lys	Gln	Met	Arg	Arg	Val	Lys	Asn	Glu	Pro	Ala
	450					455					460				
Leu	Lys	Ile	Thr	Ser	Gly	Gly	Asn	Asn	Ser	Ser	Ser	Ser	Ile	Asn	Asn
465					470					475					480
Glu	Asp	Asp	Gly	Asp	Asp	Asp	Ala	Val	Asp	Ala	Thr	Ala	Leu	Cys	
				485				490						495	
Pro	Gln	Thr	Glu	Ala	Thr	Val	Lys	Asn	Ser	Phe	Met	Ala	Pro	Asn	Asp
			500					505					510		
Glu	Arg	Thr	Glu	Asn	Ile	Leu	Tyr	Glu	Thr	Met	Gln	Ile	Ser	Leu	Ala
		515					520					525			
Lys	Ile	Cys	Asn	Asn	Pro	Ser	Ser	Met	Ser	Ser	Tyr	Arg	Val	Phe	Thr
	530					535					540				
Asn	Lys	Leu	Gln	Glu	Cys	Leu	Asn	Thr	Met	Asp	Asp	Ser	Ile	Arg	Arg
545					550					555					560
Arg	Pro	Thr	Ile	Trp	Thr	Glu	Glu	Ser	Gln	Gln	Phe	Ala	Lys	Gly	Leu
				565					570					575	
Leu	Phe	Asp	Glu	Val	Val	Thr	Ser	Ile	Val	Ala	His	Gln	Met	Ala	Gln
			580					585					590		
Asp	Ile	Cys	Lys	Ser	Glu	Ile	Phe	Gly	Gly	Met	Phe	Asn	Ala	Asn	Ser
		595					600					605			
Thr	Asn	Ile	Lys	Gly	Lys	Tyr	Glu	Gly	Gln	Lys	Lys	Ser	Leu	Tyr	Gly
	610					615					620				
Asn	Lys	His	Ser	Ser	Cys	Phe	Lys	Thr	Asn	Thr	Glu	Ser	Asn	Val	Asn
625					630					635					640
Asn	Ala	Leu	Phe	Ala	Trp	Val	Lys	Ser	Lys	Leu	His	Ser	Gly	Thr	Val
				645					650					655	
Ile	Pro	Asn	Val	Phe	Ser	Phe	Lys	Met	Ala	Ser	Glu	Lys	Pro	Ser	Lys
			660					665					670		
Met	Lys	Arg	Lys	Arg	Thr	Ser	Ser	Ala	Ser	Ser	Ser	Asn	Asp	Glu	His
		675					680					685			
Gln	Glu	Pro	Ser	Thr	Lys	Met	Met	Lys	Asn	Asp	Glu	Gly	Glu	Lys	Val
	690					695					700				
Ala	Gln	Glu	Ser	Ser	Ser	Pro	Ser	Ser	Ser	Ser	Thr	Pro	Glu	Gln	Gln
705					710					715					720
Gln	Gln	Ala	Gly	His	Asp	Lys	Glu	Thr	Ile	Asn	Leu	Ile	Pro	Leu	Ser
				725					730					735	
Phe	Ile	Lys	Met	Pro	Arg	Ser	Asn	Val	Asn	Gly	Ser	Ala	Ser	Tyr	Leu
			740					745					750		
Ser	Glu	Ile	Phe	Gly	Gln	Arg	Leu	Cys	Gly	Leu	Ser	Asp	Ala	Ser	Ser
		755					760					765			
Thr	Phe	Lys	Arg	Met	Cys	Lys	Thr	Phe	Glu	Asp	Leu	Glu	Asn	Glu	Ile
		770				775					780				
Met	Arg	Ser	Ser	Phe	Thr	Arg	Leu	Thr	Arg	Tyr	Glu	Arg	Glu	Val	Thr
785					790					795					800
Arg	Leu	Tyr	Glu	Lys	Cys	Arg	Ser	Gln	Ala	Val	Asp	Ile	Glu	Glu	Asn
				805					810					815	
Glu	Met	Asp	Val	Leu	Ser	His	Gln	Gly	Glu	Leu	Phe	Ala	Glu	Phe	Leu

820							825							830						
Glu	Asp	Pro	Ile	Ala	Tyr	Phe	Glu	Glu	Val	Leu	Glu	Asn	Ile	Lys	Ser					
835							840							845						
Trp	Ser	Leu	Glu	Asn	Val	Asn	Thr	Pro	Lys	Arg	Lys	Asn	Lys	Tyr	Ala					
850							855							860						
Lys	Val	Leu	Val	Ser	Val	Asn	Ala	Ile	Arg	Arg	Thr	Tyr	Glu	Glu	Tyr					
865							870							875						
His	Ala	Phe	Ser	Lys	Phe	Val	Pro	Met	Phe	Leu	Phe	Asn	Leu	Ile	Lys					
885							890							895						
Arg	Glu	Leu	Glu	Gly	Asp	Asn	Tyr	Thr	His	Asp	Val	His	Phe	Ser	Ser					
900							905							910						
Thr	Cys	Leu	Trp	Tyr	Leu	Thr	Val	Met	Thr	Arg	Asn	Arg	Ile	Cys	Asp					
915							920							925						
Val	Leu	Gln	Tyr	Ile	Asn	Asn	Asn	Asn	Asn	Asp	Asn	Glu	Glu	Thr	Asp					
930							935							940						
Ile	Val	Glu	Glu	Glu	Glu	Glu	Gly	Glu	Gly	Glu	Asp	Lys	Met	Glu						
945							950							955						
Glu	Ser	Met	Asp	Val	Glu	Gln	Gln	Lys	Gln	Val	Arg	Lys	Gly	Gly	Arg					
965							970							975						
Lys	Lys	Gly	Gln	Lys	Phe	Asn	Ser	Ile	Gly	Asp	Gln	Val	Ile	Arg	Lys					
980							985							990						
Phe	Val	Lys	Ser	Leu	Cys	Glu	Asn	Ser	Met	Val	Val	Ser	Ile	Ala	Ile					
995							1000							1005						
Asn	Ser	Leu	Ile	Ser	Gly	Ile	Ser	Trp	Met	Asn	Lys	Lys	Ile	Pro	Pro					
1010							1015							1020						
Gly	Phe	Leu	Lys	Asp	Ser	Ser	Thr	Ile	Asn	Thr	Leu	Asp	Glu	Val	Ser					
1025							1030							1035						
Arg	Phe	Val	Phe	Ser	Asp	Val	Lys	Ile	Asn	Arg	Lys	Ile	Asn	Gly	Thr					
1045							1050							1055						
Asp	Asp	Lys	Tyr	Glu	Thr	Val	Phe	Gly	Val	Ser	Thr	Arg	Val	Asp	Ser					
1060							1065							1070						
His	Ile	Val	Gly	Pro	Phe	Ser	Ile	Pro	Val	Asp	Phe	Ser	Ser	Ala	Gly					
1075							1080							1085						
Leu	Asp	Lys	Ala	Ser	Cys	Gly	Lys	Leu	Tyr	Val	Asn	Thr	Ile	Asp	Gly					
1090							1095							1100						
Lys	Gly	Ile	Leu	Thr	Ile	Ser	Pro	Lys	Tyr	Asp	Ser	Leu	Asn	Asp	Glu					
1105							1110							1115						
Asp	Val	Asp	Ser	Thr	Thr	Thr	Asp	Lys	Leu	Glu	Lys	Asp	Ile	Leu	His					
1125							1130							1135						
Leu	Ser	Lys	His	Asp	Thr	Phe	Phe	Asn	Ile	Asn	Lys	Asn	Lys	Val	Leu					
1140							1145							1150						
Pro	Phe	Tyr	Asn	Ile	Ser	Pro	Ser	Ser	Ser	Leu	Thr	Glu	Lys	Lys	Lys					
1155							1160							1165						
Thr	Lys	Phe	Asn	Arg	Lys	Lys	Ile	Ser	Ser	Gly	Met	Ser	Asn	Asn	Asn					
1170							1175							1180						
Gly	Met	Cys	Val	Gln	Thr	Pro	Ser	Ser	Ser	Asn	Ser	Val	Ser	Ser	Val					
1185							1190							1195						
Ser	Ser	Ile	Val	Ala	Pro	Ser	Ser	Ser	Ser	Val	Leu	Ala	Leu	Ser	Cys					
1205							1210							1215						
Leu	Ser	Ser	Thr	Lys	Lys	Lys	Ser	Ile	Trp	Asn	Glu	Asn	Met	Phe	Leu					
1220							1225							1230						
Thr	Ser	Arg	Asn	Met	Trp	Arg	Cys	Gly	Phe	Val	Val	Pro	Pro	Lys	Leu					
1235							1240							1245						
Cys	Ser	Phe	Ile	Val	Asn	His	Arg													

Ser Pro Ser Asp Leu Asn Leu Cys Ile Tyr Thr Ser Ser Leu Asn Asp  
 1315 1320 1325  
 Pro Leu Tyr Thr Cys Lys Leu Thr His Glu Glu Tyr Gln Asp Gly Asn  
 1330 1335 1340  
 Ala Leu Asp Asp Tyr Gly Ala Val Phe Val Asn Tyr Thr Phe Lys Ser  
 1345 1350 1355 1360  
 Ile Lys Ser Cys Ser Ser Lys Asp Glu Thr Ala Asp Asp Asn Ala Ala  
 1365 1370 1375  
 Ala Ala Asp Asp Asp Gly Ser Thr Thr Ser Thr Ser Ser Ser Thr Asp  
 1380 1385 1390  
 Thr Asp Ala Ala Ala Ile Gln Asp Phe Met His Val Met Ile Lys Lys  
 1395 1400 1405  
 Ile Asp Ala Met Lys Asp Ile Arg Gly Lys Tyr Lys Lys Ser Leu Ala  
 1410 1415 1420  
 Lys Lys Thr Lys Lys His  
 1425 1430

<210> 242  
 <211> 909  
 <212> DNA  
 <213> SHRIMP

<400> 242  
 atggtgtcgt ctattaccca cctctctctg ttgttcgtcg tggctgtagt agcttcgcgc 60  
 gtttttacaa ctgaaggagc tagtgtgaga gtgaaacggt gtgctgttag cccgtgcccc 120  
 gacgttattg accccgacca ccgctgccaa gggcgactgt gccgcaggtc tactcgagga 180  
 ggtgacgacg acgacgacga tgacgatgga ggaacttttcg atacagtagg gtctggtata 240  
 cttggacgca aaaagcgtgc cgcacctcca cctgaggatg aagaagagga tgatttctac 300  
 cgcaaaaagc gtgccgcacc tccacctgag gatgaagaag aggatgattt ctaccgcaaa 360  
 aagcgtgccg cacctccacc tgaggatgaa gaagaggatg agttctaccg caaaaagcgt 420  
 gccgcacctc cacctgagga tgaagaagag gatgagttct accgcaaaaa gcgtgccgca 480  
 cctccacctg aggatgaaga agaggatgag ttctaccgca aaaagcgtgc cgcacctcca 540  
 cctgaggatg aagaagagga tgagttctac cgcaaaaagc gtgccgcacc tccacctgag 600  
 gatgaagaag aggatgagtt ctaccgcaaa aagcgtgccg cacctccacc tgaggatgaa 660  
 gaagaggatg agttctaccg caaaaagcgt gccgcacctc cacctgagga tgaagaagag 720  
 gatgatttct accgcaaaaa gcgtgccgca cctccacctg aggatgaaga agaggatgat 780  
 ttctaccgca aaaagcgtgc cgcacctcca cctgaggatg aagaagagga tgatttctac 840  
 cgcaaaaagc gtgccgcacc tccacctgag gatgaagaag aggatgattt ctaccgcaaa 900  
 aagcgttaa 909

<210> 243  
 <211> 302  
 <212> PRT  
 <213> SHRIMP

<400> 243  
 Met Val Ser Ser Ile Thr His Leu Ser Leu Leu Phe Val Val Ala Val  
 1 5 10 15  
 Val Ala Ser Val Phe Thr Thr Glu Gly Ala Ser Val Arg Val Lys  
 20 25 30  
 Arg Cys Ala Val Ser Pro Cys Pro Asp Val Ile Asp Pro Asp His Arg  
 35 40 45  
 Cys Gln Gly Arg Leu Cys Arg Arg Ser Thr Arg Gly Gly Asp Asp Asp  
 50 55 60  
 Asp Asp Asp Asp Gly Gly Thr Phe Asp Thr Val Gly Ser Gly Ile  
 65 70 75 80  
 Leu Gly Arg Lys Lys Arg Ala Ala Pro Pro Pro Glu Asp Glu Glu Glu  
 85 90 95  
 Asp Asp Phe Tyr Arg Lys Lys Arg Ala Ala Pro Pro Pro Glu Asp Glu  
 100 105 110

Glu Glu Asp Asp Phe Tyr Arg Lys Lys Arg Ala Ala Pro Pro Pro Glu  
 115 120 125  
 Asp Glu Glu Glu Asp Glu Phe Tyr Arg Lys Lys Arg Ala Ala Pro Pro  
 130 135 140  
 Pro Glu Asp Glu Glu Glu Asp Glu Phe Tyr Arg Lys Lys Arg Ala Ala  
 145 150 155 160  
 Pro Pro Pro Glu Asp Glu Glu Glu Asp Glu Phe Tyr Arg Lys Lys Arg  
 165 170 175  
 Ala Ala Pro Pro Pro Glu Asp Glu Glu Glu Asp Glu Phe Tyr Arg Lys  
 180 185 190  
 Lys Arg Ala Ala Pro Pro Pro Glu Asp Glu Glu Glu Asp Glu Phe Tyr  
 195 200 205  
 Arg Lys Lys Arg Ala Ala Pro Pro Glu Asp Glu Glu Glu Asp Glu  
 210 215 220  
 Phe Tyr Arg Lys Lys Arg Ala Ala Pro Pro Pro Glu Asp Glu Glu Glu  
 225 230 235 240  
 Asp Asp Phe Tyr Arg Lys Lys Arg Ala Ala Pro Pro Pro Glu Asp Glu  
 245 250 255  
 Glu Glu Asp Asp Phe Tyr Arg Lys Lys Arg Ala Ala Pro Pro Pro Glu  
 260 265 270  
 Asp Glu Glu Glu Asp Asp Phe Tyr Arg Lys Lys Arg Ala Ala Pro Pro  
 275 280 285  
 Pro Glu Asp Glu Glu Glu Asp Asp Phe Tyr Arg Lys Lys Arg  
 290 295 300

<210> 244  
 <211> 1119  
 <212> DNA  
 <213> SHRIMP

<400> 244  
 atggataact tgaaaggga atttggtgcg cttaaaacag acctcaccca ttacaaaaca 60  
 cagttggata gatctatatt ggtatttggt gatgttggtg gtagattata tggtatagta 120  
 aatagtgaac aaacagctaa aaaggaaggt ctagcaacta gagtggaaca gcaagccaca 180  
 gagatacaac aattcaagga cgaaataaac aacaaatata atgctctaac aaatactttg 240  
 gatgatata tctacatttt tgatcatgga gggagtttca aaagagcaaa acataaggcc 300  
 ataattgaag cgagggaata ctctaaaccg ctgagggaat tagagtgcac gtttacgcgt 360  
 atagcggaca tgtaaacctt gacttttatg actgtgtaca ccaatatcat tactgaattt 420  
 agacactcta gtgaacaagc cactaatagt ataaatgtca ccctcggacg tcttttcttg 480  
 tgtgacgact tgtgcaatca attacaaaaa gaagaggaag aagaggaaga ttgaaacag 540  
 aaattcatta ctttccatgc gaacctatac atgctggaca cacgcctaaa gaaagatttg 600  
 ataattttca aagatgtcat acaacaactt cacgtgattt tgcaaaagga tacctatgct 660  
 gtaaaagaag gtgtggccat tagatgtgcg aaacagatga acgaaataag tcaatacagg 720  
 gacaacctca aggataatta caatacattt tcaaacattt tgaatgaaat tgtctacatt 780  
 tttgatcacg ggggacattt tgaagaagta aaacacaaag ccataactct gactagaaat 840  
 tacttgaaaa cactcatggg attaaaatgc atgttcaaac gcataatccga aatgttgtca 900  
 ttgacttttc taacagtgtg cactaatgtt atagcagaat ttataaacgc tagcaatatt 960  
 tctgatagag agatcaataa ttatcttgtc caacttgtaa catgtaacga attgtgcaac 1020  
 caactcccca aacctaaaca ataccgtccc ctcagtttga tagataacat agcttatttt 1080  
 tctctttctg tccaaaaaca tctgagtggg tttctttag 1119

<210> 245  
 <211> 368  
 <212> PRT  
 <213> SHRIMP

<400> 245  
 Met Asp Asn Leu Lys Gly Glu Phe Val Lys Thr Asp Leu Thr His Tyr  
 1 5 10 15  
 Lys Thr Gln Leu Asp Arg Ser Ile Leu Val Phe Val Asp Val Val Gly



atg gat agt tt	gtt gcct gat	atc gagg ata	acacc aga ac	tgg ctg gca a	gtt aac ctg g	60
atc ttcatac	cagaaa aca a	ctt caag att	gtc caga act	cac tcc cag a	cgac caag tt	120
atc tcccaat	tcagata ttt	cgacc ata ga	catt gct ata	cgt ttat gga	gatt ttg atg	180
gcaa acatta	aaatcca aga	caggaa aca a	aac accac ag	ccata tgt ga	att gaca act	240
gga agaga ag	gactttt atg	taga aga acc	ata cct gta t	ttt tgg gtt c	agag gaaaa a	300
cgaga agagt	tattgggg aa	tct ccct gaa	ggt gcagaaa	ttt tcagg cc	taga gaag tt	360
atg caagta a	ttggt actct	ctt ggaca ag	aaact agaaa	ttg acgc agc	tata gctt ct	420
gtaa aggctg	ccctctgt gc	tgg ttcat ca	tcgt tatacc	taat catg ag	ccaca ttgt g	480
aaa atgacct	tttctgct at	caca aacatg	aag gatata a	acga agaata	ttt cgt agac	540
ttt atatttc	gtcataaaca	att cctcaac	cct gaattct	tca agcacct	tatat ctttg	600

```

ctcaagaatt ccaggaagga acatgttgcc catctagtaa gacgtctaga acactttctc 660
atgctatgga ccctttccaa gatgagggtc acagaaatgg aagaaaacta cttcccaatc 720
tccagcgata gtgattacgg catctgtgaa aaatgtgcac gaaaaactcc caaatacaag 780
ctccgtatatt ttagggaacg aaaatgctgc gatagatggt gccgtcttta tcaccaacaa 840
ccgcctccgg aggtgtataa ttgggatgga aaaataaccc aacaatccaa taaaggctac 900
attaatgcag gcgatgaaat tatcggcatg ctaaactcaa atgataaggg aaaaacattc 960
cctcctatac ctaagatggt tgtacgaaga gtggtggacg gtgtctacgg gcaagggaact 1020
atcctgtcaa agattttgaa gttcaggcag gcaaatatcc ccacgtgtct attcgtgaca 1080
tgcaataaat gcaataggat tttcaggctc actatcttag ggcctacaag aacatcctt 1140
tgcccacctt gcagaaagaa aagtgttgca gtaaatacac aacagaaagg agaaaataaa 1200
ccttcgtttg tgcaaaaagg aacaaaacgt ctacgagtgg ataccggtag caacaagaac 1260
acgttagaaa aattctgttc ctgggaaaga ttcaatactg aagttttgct cccttggtt 1320
ggctacacta ttgagtctaa gtggcagaac tggaatctt ttctgggtta ttcgagtacc 1380
agatataagg aactgtgggc ctttgtgaac aaacaggaaa tatcttccat gaaagactcc 1440
tacataaaaa ttgaagacat cgaccagtta ttgaggagta tcttgcaaga ccagaagggt 1500
gtatttgaga ccgtctgcaa aataaagagc agagatggtt tgtga 1545

```

&lt;210&gt; 247

&lt;211&gt; 514

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 247

```

Met Asp Ser Cys Cys Leu Ile Ser Arg Ile Thr Pro Glu Leu Ala Gly
1      5      10      15
Lys Leu Thr Trp Ile Phe Ile Pro Glu Asn Asn Phe Lys Ile Val Gln
20     25     30
Asn Ser Leu Pro Asp Asp Gln Val Ile Ser Gln Phe Arg Tyr Phe Asp
35     40     45
His Arg His Cys Tyr Thr Phe Met Glu Ile Leu Met Ala Asn Ile Lys
50     55     60
Ile Gln Asp Arg Lys Gln Asn Thr Thr Ala Ile Cys Glu Leu Thr Thr
65     70     75     80
Gly Arg Glu Gly Leu Leu Cys Arg Arg Thr Ile Pro Val Phe Leu Gly
85     90     95
Ser Glu Glu Lys Arg Glu Glu Leu Leu Gly Asn Leu Pro Glu Gly Ala
100    105    110
Glu Ile Phe Arg Pro Arg Glu Val Met Gln Val Ile Gly Thr Leu Leu
115    120    125
Asp Lys Lys Leu Glu Ile Asp Asp Gly Ile Ala Ser Val Lys Ala Ala
130    135    140
Leu Cys Ala Gly Ser Ser Leu Tyr Leu Ile Met Ser His Ile Val
145    150    155    160
Lys Met Thr Phe Ser Ala Ile Thr Asn Met Lys Asp Ile Asn Glu Glu
165    170    175
Tyr Phe Val Asp Phe Ile Phe Arg His Lys Gln Phe Leu Asn Pro Glu
180    185    190
Phe Phe Lys His Leu Ile Ser Leu Leu Lys Asn Ser Arg Lys Glu His
195    200    205
Val Ala His Leu Val Arg Arg Leu Glu His Phe Leu Met Leu Trp Thr
210    215    220
Leu Ser Lys Met Arg Phe Thr Glu Met Glu Glu Asn Tyr Phe Pro Ile
225    230    235    240
Ser Ser Asp Ser Asp Tyr Gly Ile Cys Glu Lys Cys Ala Arg Lys Thr
245    250    255
Pro Lys Tyr Lys Leu Arg Ile Phe Arg Glu Arg Lys Cys Cys Asp Arg
260    265    270
Cys Cys Arg Leu Tyr His Gln Gln Pro Pro Pro Glu Val Tyr Asn Trp
275    280    285
Asp Gly Lys Ile Thr Gln Gln Ser Asn Lys Gly Tyr Ile Asn Ala Gly
290    295    300

```

Asp Glu Ile Ile Gly Met Leu Asn Ser Asn Asp Lys Gly Lys Thr Phe  
 305 310 315 320  
 Pro Pro Ile Pro Lys Met Val Val Arg Arg Val Val Asp Gly Val Tyr  
 325 330 335  
 Gly Gln Gly Thr Ile Leu Ser Lys Ile Leu Lys Phe Arg Gln Ala Asn  
 340 345 350  
 Ile Pro Thr Cys Leu Phe Val Thr Cys Asn Lys Cys Asn Arg Ile Phe  
 355 360 365  
 Arg Leu Thr Ile Leu Gly Pro Thr Arg Asn Ile Leu Cys Pro Pro Cys  
 370 375 380  
 Arg Lys Lys Ser Val Ala Val Asn Thr Gln Gln Lys Gly Glu Asn Lys  
 385 390 395 400  
 Pro Ser Phe Val Gln Lys Gly Thr Lys Arg Leu Arg Val Asp Thr Gly  
 405 410 415  
 Ser Asn Lys Asn Thr Leu Glu Lys Phe Cys Ser Trp Glu Arg Phe Asn  
 420 425 430  
 Thr Glu Val Leu Leu Pro Trp Leu Gly Tyr Thr Ile Glu Ser Lys Trp  
 435 440 445  
 Gln Asn Trp Glu Ser Phe Leu Gly Tyr Ser Ser Thr Arg Tyr Lys Glu  
 450 455 460  
 Leu Trp Ala Phe Val Asn Lys Gln Glu Ile Ser Ser Met Lys Asp Ser  
 465 470 475 480  
 Tyr Ile Lys Ile Glu Asp Ile Asp Gln Leu Leu Arg Ser Ile Leu Gln  
 485 490 495  
 Asp Gln Lys Gly Val Phe Glu Thr Val Cys Lys Ile Lys Ser Arg Asp  
 500 505 510  
 Gly Leu

<210> 248  
 <211> 1242  
 <212> DNA  
 <213> SHRIMP

<400> 248  
 atggagtcaa tcaaactggt caccgttgct ggtctgaata tggagcaagc caaccaagtg 60  
 gctgaagaaa tcaagtcaga atataaaaacc gaggaggaaa agaggattgc ccagggaagt 120  
 ttgacaaat tcacaaaaaa actcattatg caagtagata cgtctaaaca cttacttaca 180  
 agagaaaacc ccaaccgttt tgtatcccgcc cccattgtcc atgaagatct ctgggaaatg 240  
 tacaaaaaag aggttgccctg tttttggaca ttggaagaga ttgatttcga aagggatcct 300  
 aaagattggg agaaaactcac tcaagatgag aaggatttca ttctccagat tctggcggtc 360  
 tttgcatcct ctgacggaat tgtaattgaa aatcttataa cacgtcttcg tcaagtggcg 420  
 cagattccag aagcgaggag tttctttgac ttccaagttg gaatggagag tattcatggc 480  
 aacgtctacg gagaactgat tgatagactg gtgcccgcacg aaaaagacaa ggctatcttg 540  
 tttaacgctg cacaacactt ccccgccatc aagaagaagg agcagtgggc tattaattgg 600  
 atgcaaagca ataacgattt ggcggaacta attggtgcct ttgctgcagt tgaaggaaatc 660  
 ttcttttagtg gtgcattcgc atccattttc tggatcaaga acaggggtat tttgcctggt 720  
 ctcacctcct ccaatgagtt cattttctagg cacgaaggtc ttcacgcgca ctttgcattgc 780  
 atgctgttga aaaagggttt tgttgatacc ccatcaagag aaaggattct tgaaattgtc 840  
 actgaagccg tccgaattga acaagaattt ctcacagttt ccctgcctgt taaattagtg 900  
 ggaatgaact gcaagttgat gagccagtac attgaatttg tggcagataa actattgggt 960  
 gaaatgggac tagaaaagca ctataatgtt accaaccctc tcccattcat ggacaatatt 1020  
 tccctcgaga ataagaccaa cttttttgaa aagagagtcg ccgagtatca acgtgcccag 1080  
 gtcattggct ctatcaataa gatcaagaag gaccaacaaa cccaagaaac tggttctcct 1140  
 ctccaattc tgactgcacc tctccagtc tcttctcat catccgaaca agaagatggt 1200  
 gaagacggcg tcgggggacta catcagttat gacgattttt ag 1242

<210> 249  
 <211> 409  
 <212> PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 249

```

Met Glu Ser Ile Lys Leu Phe Thr Val Ala Gln Met Glu Gln Ala Asn
 1          5          10          15
Gln Val Ala Glu Ile Lys Ser Glu Tyr Lys Thr Glu Glu Glu Lys
 20          25          30
Arg Ile Ala Gln Glu Val Phe Asp Lys Phe Thr Lys Lys Leu Ile Met
 35          40          45
Gln Val Asp Thr Ser Lys His Leu Leu Thr Arg Glu Asn Pro Asn Arg
 50          55          60
Phe Val Ser Arg Pro Ile Val His Glu Asp Leu Trp Glu Met Tyr Lys
 65          70          75          80
Lys Glu Val Ala Cys Phe Trp Thr Leu Glu Glu Ile Asp Phe Glu Arg
 85          90          95
Asp Pro Lys Asp Trp Glu Lys Leu Thr Gln Asp Glu Lys Asp Phe Ile
100          105          110
Leu Gln Ile Leu Ala Phe Phe Ala Ser Ser Asp Gly Ile Val Ile Glu
115          120          125
Asn Leu Thr Thr Arg Leu Arg Gln Val Ala Gln Ile Pro Glu Ala Arg
130          135          140
Ser Phe Phe Asp Phe Gln Val Gly Met Glu Ser Ile His Gly Asn Val
145          150          155          160
Tyr Gly Glu Leu Ile Asp Arg Leu Val Pro Asp Glu Lys Asp Lys Ala
165          170          175
Ile Leu Phe Asn Ala Ala Gln His Phe Pro Ala Ile Lys Lys Lys Glu
180          185          190
Gln Trp Ala Ile Asn Trp Met Gln Ser Asn Asn Asp Leu Ala Glu Leu
195          200          205
Ile Val Ala Phe Ala Ala Val Glu Gly Ile Phe Phe Ser Gly Ala Phe
210          215          220
Ala Ser Ile Phe Trp Ile Lys Asn Arg Gly Ile Leu Pro Gly Leu Thr
225          230          235          240
Ser Ser Asn Glu Phe Ile Ser Arg Asp Glu Gly Leu His Arg Asp Phe
245          250          255
Ala Cys Met Leu Leu Lys Lys Gly Phe Val Asp Thr Pro Ser Arg Glu
260          265          270
Arg Ile Ile Val Thr Glu Ala Val Arg Ile Glu Gln Glu Phe Leu Thr
275          280          285
Val Ser Leu Pro Val Lys Leu Val Gly Met Asn Cys Lys Leu Met Ser
290          295          300
Gln Tyr Ile Glu Phe Val Ala Asp Lys Leu Leu Val Glu Met Gly Leu
305          310          315          320
Glu Lys His Tyr Asn Val Thr Asn Pro Phe Pro Phe Met Asp Asn Ile
325          330          335
Ser Leu Glu Asn Lys Thr Asn Phe Phe Glu Lys Arg Val Ala Glu Tyr
340          345          350
Gln Arg Ala Gln Val Met Ala Ser Ile Asn Lys Ile Lys Lys Asp Gln
355          360          365
Gln Thr Gln Glu Thr Gly Ser Pro Leu Pro Ile Leu Thr Ala Pro Pro
370          375          380
Pro Val Ser Ser Ser Ser Ser Glu Gln Glu Asp Val Glu Asp Gly Val
385          390          395          400
Gly Asp Tyr Ile Ser Tyr Asp Asp Phe
405

```

&lt;210&gt; 250

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 250

```

atgaatttac ttccaatatt cctgacaacc ttttttgttg cggtagatgc atgctcttgc 60
tctaccatct gccttttacc tgatgggaag aaacaaccct tggtttttga ttctgtatta 120
gaagagggtgg tataccctac agatgtgtgt gggccaaagg gagctggcga attattcact 180
ggtgtggatc ttttgaccct ctgtatagga ggtaaaaaaca atggagggtga atggtcagga 240
aaaggtcctt gtccaaggat caataacgct gtcgttgaac gagattactc ccttgacgag 300
gaggattgta aagggttttag aaaggggttc cgaattcctg gcactgacca ttttcatact 360
gtcttttccc tttgttgggt agacagagat atgcacgccca agtgggtgcg caacaaaata 420
aaccctggta tagtaactga tgatgaagat ttggtagatt ctggtattag gactaaattt 480
aaatactctt ctaaaatttt tggtaaagga ttcaatccga gacctcttta ctccctcgac 540
tatcaagaga ggattaagat attaaagtct cattttaaca agaggacggg taatttcttt 600
gctcgaggcc acttggtccg ggctggagat ttttctctcg cttcagagag atgggcaact 660
tttgctctag agaattgcagt acctcaaata cagaaccata acaatggtga atggaaagat 720
attgaaaatc gtgcaagaac tacgccaggt gccgcgtggg ctgagactgg accaatattt 780
taccaacaca agaagaagga atatctagac aagaagaaga agtacatccc tatccctcat 840
gccctctaca agatttgtga cgacaagaat aacaaggaat tgttccgtgt acagagtgat 900
atgtcttgga aataa 915

```

&lt;210&gt; 251

&lt;211&gt; 298

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 251

```

Met Asn Leu Leu Pro Ile Phe Leu Thr Thr Phe Phe Val Ala Val Asp
 1          5          10          15
Ala Cys Ser Cys Ser Thr Ile Cys Leu Leu Pro Asp Gly Lys Lys Gln
 20          25          30
Pro Leu Val Phe Asp Ser Val Leu Glu Glu Val Val Tyr Pro Thr Asp
 35          40          45
Val Cys Gly Pro Lys Gly Ala Gly Glu Leu Phe Thr Gly Val Asp Leu
 50          55          60
Leu Thr Leu Cys Ile Gly Gly Lys Asn Asn Gly Gly Glu Trp Ser Gly
 65          70          75          80
Lys Gly Pro Cys Pro Arg Ile Asn Asn Ala Val Val Glu Arg Asp Tyr
 85          90          95
Ser Leu Asp Glu Glu Asp Cys Lys Gly Phe Arg Lys Gly Phe Arg Ile
100          105          110
Pro Gly Thr Asp His Phe His Thr Val Phe Ser Leu Cys Trp Val Asp
115          120          125
Arg Asp Met His Ala Lys Trp Val Arg Asn Lys Ile Asn Pro Gly Ile
130          135          140
Val Thr Asp Asp Glu Asp Leu Val Asp Ser Gly Ile Arg Thr Lys Phe
145          150          155          160
Lys Tyr Ser Ser Lys Ile Phe Gly Lys Gly Phe Asn Pro Arg Pro Lys
165          170          175
Leu Asp Tyr Gln Glu Arg Ile Lys Ile Leu Lys Ser His Phe Asn Lys
180          185          190
Arg Thr Gly Asn Phe Phe Arg His Leu Ala Pro Ala Gly Asp Phe Phe
195          200          205
Leu Ala Ser Trp Ala Thr Phe Ala Leu Glu Asn Ala Val Pro Gln Ile
210          215          220
Gln Asn His Asn Asn Gly Glu Trp Lys Asp Ile Glu Asn Arg Ala Arg
225          230          235          240
Thr Thr Pro Gly Ala Ala Trp Ala Glu Thr Gly Pro Ile Phe Tyr Gln
245          250          255
His Lys Lys Lys Glu Tyr Leu Asp Lys Lys Lys Lys Tyr Ile Pro Ile
260          265          270
Pro His Ala Leu Tyr Lys Ile Val Tyr Asp Lys Asn Asn Lys Glu Leu
275          280          285

```

Phe Arg Val Gln Ser Asp Met Ser Trp Lys  
290 295

<210> 252  
<211> 789  
<212> DNA  
<213> SHRIMP

<400> 252  
atgtcgttgg ctgtgacaga agattacggg cacaatgaaa agttgatcaa acggttacaa 60  
acctctgtat atcacacccc tctattaggt gcagaccatg taatgaaatc catatcagac 120  
tacataattt ctgcgtcgatt catgaactac acaaattttat taaaacaagt tgaatatgtt 180  
ttcgatgaag aaacaggagc agttatagct aatatctgtc tgttaaaaat cctagaaaaga 240  
tgcgacacaga aaggagggaat atatgatgca ccagaagatg ttgcattctt caattctaag 300  
atgggggaag taacgcgcct atttactatt ataggaggta ggcccaatat gacggtgctg 360  
gttaatttta aacatgggca gacaaataat cctgcctatg gttatctcac agatgataat 420  
gatactacta ctgttactcc tcctgttact cctcctccat ctccagctgc aagaagatcc 480  
ccttttttca cagcactct catatccgag tcgtcttcag ttgaccatta tgtattgatg 540  
catgataacc caaaaagatc ttcatttaag gtgtatgata ttcacgcaga aacctttccc 600  
cataaagctc cttctgttcc taccttcccc cctaaaacct cgtttgaaat ttctgacgtg 660  
actctcgatt gttcaatgga gattttttca cgagacaggg atgttttaga caatgttcac 720  
gactatattg ctaacgaccc cgtaccattt ttagtggatg ttgtgcaccg tggatctagt 780  
ctccgttga 789

<210> 253  
<211> 260  
<212> PRT  
<213> SHRIMP

<400> 253  
Met Ser Leu Ala Val Thr Glu Asp Tyr Gly His Asn Glu Lys Leu Ile  
1 5 10 15  
Lys Arg Leu Gln Thr Ser Val Tyr His Thr Pro Leu Leu Gly Ala Asp  
20 25 30  
His Val Met Lys Ser Ile Ser Asp Tyr Ile Ile Ser Arg Arg Phe Met  
35 40 45  
Asn Tyr Thr Asn Leu Leu Lys Gln Val Glu Tyr Val Phe Asp Glu Glu  
50 55 60  
Thr Gly Ala Val Ile Ala Asn Ile Cys Leu Leu Lys Ile Arg Cys Ala  
65 70 75 80  
Gln Lys Gly Gly Ile Tyr Asp Ala Pro Glu Asp Val Ala Phe Phe Asn  
85 90 95  
Ser Lys Met Gly Glu Val Thr Arg Leu Phe Thr Ile Ile Gly Gly Arg  
100 105 110  
Pro Asn Met Thr Val Arg Val Asn Phe Lys His Gly Gln Thr Asn Asn  
115 120 125  
Pro Ala Tyr Gly Tyr Leu Thr Asp Asp Asn Asp Thr Thr Thr Val Thr  
130 135 140  
Pro Pro Val Thr Pro Pro Pro Ser Pro Ala Ala Arg Arg Ser Pro Phe  
145 150 155 160  
Phe Thr Arg Thr Leu Ile Ser Glu Ser Ser Ser Val Asp His Tyr Val  
165 170 175  
Leu Met His Asp Asn Pro Lys Arg Ser Ser Phe Lys Val Tyr Asp Ile  
180 185 190  
His Ala Glu Thr Phe Pro His Lys Ala Pro Ser Val Pro Thr Phe Pro  
195 200 205  
Pro Lys Thr Ser Phe Glu Ile Ser Asp Val Thr Leu Asp Cys Ser Met  
210 215 220  
Glu Ile Phe Ser Arg Asp Arg Asp Val Leu Asp Asn Val His Asp Tyr  
225 230 235 240

Ile Ala Asn Asp Pro Val Pro Phe Leu Val Asp Val Val His Arg Gly  
 245 250 255  
 Ser Ser Leu Arg  
 260

<210> 254  
 <211> 2571  
 <212> DNA  
 <213> SHRIMP

<400> 254  
 atggcatcca cttcttcac c aactaagaaa agagtacatg aagaagatga aaatctcatc 60  
 ccacaaccca aaaagaaaaa atcaaaagaaa gtactacatg ttctgttgga caagtataga 120  
 gctgtggata aaaaggtggg aaatctcata cacaagatat tagatcaaga aaaggaccac 180  
 ctttctagta ccgaactgca aatgataact gaatgtaatg gtgcgcgaga agatctgctt 240  
 aaacatcttc tagacgaagg agaatttaac cctactataa ttgaagtagt atcatccatg 300  
 cctattgaaa caatatacga aatactctct tcttctgctg acgacaagaa gtttgtacag 360  
 atatcattat caatgttgat ccacatactt ttcttcgctg ataagggtac tatgtgggta 420  
 tccaacgcgt gcgttcaaaa tgttttgggg aacgactata aagtgggaatt tgaaaatata 480  
 cgtaaaaagt atctgatatt ggaagactta ctgaacggcg tttcaaatca ttggtctgaa 540  
 catggtcctc tttctcacat gctccattct tcaatcccta ttgtacaaga catgttattg 600  
 aacaggctgg tgcgttactt tagcacgtat gatggagatg ctcaattcga tatatcattc 660  
 ataattaata gtgtcttggt ggggaattgat aaaagtgttc tcaacgaatt gacacaattg 720  
 atatcgaggg gtgttttcat tgtgtcgtac gtaccgatgc gtgtacgaac accttcaaag 780  
 gacagtaatc ggccacaaaa tactccttca caaaatatgt cagcactagg tatgaaactc 840  
 aatacatttt catccagaat ctcatgttac agaaacaata cctttaaaaa actaaccgag 900  
 ttagtgcata actttgatta cggttccaaa gatgcatcat catcatctcc tctctctcct 960  
 tcattatcgg acagcgtcaa cacttttgtg aggttgtaca ccaactatga catattctta 1020  
 aaggtgattt ccgactggaa aatgccttat gggttcttta agaaaacttt tgacgtcctt 1080  
 tattctaagg ggttgatgac attatcagtg tctgaatata cactcaaaaa agagttgggt 1140  
 acgtttttgc gcgccttgaa ggaaagggaa attttaatct ataaaatgga gaagagagac 1200  
 attatatgta tactgaaaaa gtctttgttc ggatttaatt tcaggtgttt aaaacaatta 1260  
 ctccctctct tcaaacactt tttaaaaatt gaagagggtta aacatatagc acgttttgtc 1320  
 ttagagattt acagtctcat gtgcaaaact caaaaagatt tgcagagttt ccctgccata 1380  
 cagtctgctt cacttttcat ggaagaattc ccttggcttg caaaaacttg gatcgacgac 1440  
 gatgatgatg agggaggaaa gggacatacc ctattaacat ttgctatagt gcacagatat 1500  
 cccttaataa gccaaacttat ttcacacca attttaaaat cgttagtgaa tactacatgt 1560  
 agagacaagc actttactcc cctcatgcac ctgcacca caa cgtctataat gtaccaatgc 1620  
 aatacactct tgtgccttat aataaatgga gctaaaccag agttcataaa caagttcaac 1680  
 gagaatgttt tgcatatagc gattgaaaaat gttaactatg gagtcatcac tgaattgaga 1740  
 ggaacattat ccagcgaaca aattgaaaaa atggtcaatg taagaagaat gatggataat 1800  
 acaaacctt taatgatcgc cttggcgagg gagaatatg tactcgctca gctttttgac 1860  
 ggtctttaca agcccaaaat aaagggtcgt ttcggttctt caaagaggct aaggatacca 1920  
 gagtttgtcc tcttaaaggg cctaaaggaa tcagttgcat atttggaac gaggaatata 1980  
 tcctacgata ttaacatcat aaaggatgca gtaatggaca acagtctttt tgaagaggag 2040  
 tacgaaatag cagcagcagg actgcgaggc aataactgca accctgaagc agacgagaag 2100  
 actatgaaca cgtggaactt tttcaccaaa aattcaacca aatgggcaag ctctattttc 2160  
 caaaagaata ggcagaaatt tgtaaaagatt gtggatgga tgaataggac atatgaagac 2220  
 tctgaatgtg caatatgctt ggatagtctg gacggggatc ttcttcagg gagaacaacg 2280  
 tgcggtcatt gcttccacaa cgtctgttgg ttatccttga taaggatgag cgggccgaat 2340  
 aatggcagcc gcgcaagagg aggaggaata aaatgcccg cctgcagaca agtcacctgc 2400  
 ctcggaaaaa gactaggggt tgccgactat gatattgaaa cagaggaaga acgtgacacg 2460  
 aaaaatgtcg tgccttcggt agaagaagga agaagggaat ggaggaagat tgggtgttgac 2520  
 agatatgaat ttcttgtagg tggagtgtgg acaaatgaaa taaaactata a 2571

<210> 255  
 <211> 846  
 <212> PRT  
 <213> SHRIMP

&lt;400&gt; 255

```

Met Ala Ser Thr Ser Ser Ser Thr Lys Lys Arg Val His Glu Glu Asp
 1      5      10      15
Glu Asn Leu Ile Pro Gln Pro Lys Lys Lys Lys Ser Lys Lys Val Leu
 20      25      30
Pro Phe Pro Val Asp Lys Tyr Arg Ala Val Asp Lys Lys Val Val Asn
 35      40      45
Leu Ile His Lys Ile Leu Asp Gln Glu Lys Asp His Leu Ser Ser Thr
 50      55      60
Glu Leu Gln Met Ile Thr Glu Cys Asn Gly Ala Arg Glu Asp Leu Leu
 65      70      75      80
Lys His Leu Leu Asp Glu Gly Glu Phe Asn Pro Thr Ile Ile Glu Val
 85      90      95
Val Ser Ser Met Pro Ile Glu Thr Ile Tyr Glu Ile Leu Ser Ser Ser
100      105      110
Ala Asp Asp Lys Lys Phe Val Gln Ile Ser Leu Ser Met Leu Ile His
115      120      125
Ile Leu Phe Phe Ala Asp Lys Gly Thr Met Trp Val Ser Asn Ala Cys
130      135      140
Val Gln Asn Val Leu Gly Asn Asp Tyr Lys Val Glu Phe Glu Asn Ile
145      150      155      160
Arg Lys Lys Tyr Leu Ile Asp Leu Leu Asn Gly Val Ser Asn His Trp
165      170      175
Ser Glu His Gly Pro Leu Ser His Met Leu His Ser Ser Ile Pro Ile
180      185      190
Val Gln Asp Met Leu Leu Asn Arg Leu Val Arg Tyr Phe Ser Thr Tyr
195      200      205
Asp Gly Asp Ala Gln Phe Asp Ile Ser Phe Ile Ile Asn Ser Val Leu
210      215      220
Trp Gly Ile Asp Lys Ser Val Leu Asn Glu Leu Thr Gln Leu Ile Ser
225      230      235      240
Arg Gly Val Phe Ile Val Ser Tyr Val Pro Met Arg Val Arg Thr Pro
245      250      255
Ser Lys Asp Ser Asn Arg Pro Gln Asn Thr Pro Ser Gln Asn Met Ser
260      265      270
Ala Leu Gly Met Lys Leu Asn Thr Phe Ser Ser Arg Ile Ser Val Tyr
275      280      285
Arg Asn Asn Thr Phe Lys Lys Leu Thr Glu Leu Val His Asn Phe Asp
290      295      300
Tyr Gly Ser Lys Asp Ala Ser Ser Ser Ser Pro Pro Pro Pro Ser Leu
305      310      315      320
Ser Asp Ser Val Asn Thr Phe Val Arg Leu Tyr Thr Asn Tyr Asp Ile
325      330      335
Phe Leu Lys Val Ile Ser Asp Trp Lys Met Pro Tyr Gly Phe Phe Lys
340      345      350
Lys Thr Phe Asp Val Lys Lys Gly Leu Met Thr Leu Ser Val Ser Glu
355      360      365
Tyr Thr Leu Lys Lys Glu Leu Val Thr Phe Leu Arg Ala Leu Lys Glu
370      375      380
Arg Glu Ile Leu Ile Tyr Lys Met Glu Lys Arg Asp Ile Ile Cys Ile
385      390      395      400
Leu Lys Lys Ser Leu Phe Gly Phe Asn Phe Arg Cys Leu Lys Gln Leu
405      410      415
Leu Pro Leu Phe Lys His Phe Leu Lys Ile Glu Glu Val Lys His Ile
420      425      430
Ala Arg Phe Val Phe Arg Asp Tyr Ser Leu Met Cys Lys Thr Gln Lys
435      440      445
Asp Leu Gln Ser Phe Pro Ala Ile Gln Ser Ala Ser Leu Phe Met Glu
450      455      460
Glu Phe Pro Trp Leu Ala Lys Thr Trp Ile Asp Asp Asp Asp Asp Glu
465      470      475      480

```



Gly	Gly	Lys	Gly	His	Thr	Leu	Leu	Thr	Phe	Ala	Ile	Val	His	Arg	Tyr
				485					490					495	
Pro	Leu	Ile	Ser	Gln	Leu	Ile	Ser	His	Pro	Ile	Leu	Lys	Ser	Leu	Val
			500					505					510		
Asn	Thr	Thr	Cys	Arg	Asp	Lys	His	Phe	Thr	Pro	Leu	Met	His	Leu	Ala
		515					520					525			
Asn	Thr	Ser	Ile	Met	Tyr	Gln	Cys	Asn	Thr	Leu	Leu	Cys	Leu	Ile	Ile
	530					535					540				
Asn	Gly	Ala	Lys	Pro	Glu	Phe	Ile	Asn	Lys	Phe	Asn	Glu	Asn	Val	Leu
545					550					555					560
His	Ile	Ala	Ile	Glu	Asn	Val	Asn	Tyr	Gly	Val	Ile	Thr	Glu	Leu	Arg
				565					570					575	
Gly	Thr	Leu	Ser	Ser	Glu	Gln	Ile	Glu	Lys	Met	Val	Asn	Val	Arg	Arg
			580					585					590		
Met	Met	Asp	Asn	Thr	Thr	Pro	Leu	Met	Ile	Ala	Arg	Glu	Asn	Ile	Val
		595					600					605			
Leu	Ala	Gln	Leu	Phe	Asp	Gly	Lys	Pro	Lys	Ile	Lys	Val	Arg	Phe	Gly
	610					615					620				
Ser	Ser	Lys	Arg	Leu	Arg	Ile	Pro	Glu	Phe	Val	Leu	Leu	Lys	Gly	Leu
625					630					635					640
Lys	Glu	Ser	Val	Ala	Tyr	Leu	Glu	Thr	Arg	Asn	Ile	Ser	Tyr	Asp	Ile
				645					650					655	
Asn	Ile	Ile	Lys	Asp	Ala	Val	Met	Asp	Asn	Ser	Leu	Phe	Glu	Glu	Glu
			660					665					670		
Tyr	Glu	Ile	Ala	Ala	Ala	Gly	Leu	Arg	Gly	Asn	Asn	Cys	Asp	Pro	Glu
		675					680					685			
Ala	Asp	Glu	Lys	Thr	Met	Asn	Thr	Trp	Asn	Phe	Phe	Thr	Lys	Asn	Ser
	690					695					700				
Thr	Lys	Trp	Ala	Ser	Ser	Ile	Phe	Gln	Lys	Asn	Arg	Gln	Lys	Phe	Val
705					710					715					720
Lys	Ile	Val	Asp	Gly	Met	Asn	Arg	Thr	Tyr	Glu	Asp	Ser	Glu	Cys	Ala
			725						730					735	
Ile	Cys	Leu	Asp	Ser	Leu	Asp	Gly	Asp	Leu	Pro	Ser	Gly	Arg	Thr	Thr
			740				745						750		
Cys	Gly	His	Cys	Phe	His	Asn	Val	Cys	Trp	Leu	Ser	Leu	Ile	Arg	Met
		755					760					765			
Ser	Gly	Pro	Asn	Asn	Gly	Ser	Arg	Arg	Gly	Gly	Ile	Lys	Cys	Pro	Ser
	770					775					780				
Cys	Arg	Gln	Val	Thr	Cys	Leu	Gly	Lys	Arg	Leu	Gly	Val	Ala	Asp	Tyr
785					790					795					800
Asp	Ile	Glu	Thr	Glu	Glu	Glu	Arg	Asp	Thr	Lys	Asn	Val	Val	Pro	Ser
				805					810					815	
Val	Glu	Glu	Gly	Arg	Arg	Glu	Trp	Arg	Lys	Ile	Gly	Val	Asp	Arg	Tyr
			820					825					830		
Glu	Phe	Leu	Val	Gly	Gly	Val	Trp	Thr	Asn	Glu	Ile	Lys	Leu		
		835					840					845			

<210> 256  
 <211> 930  
 <212> DNA  
 <213> SHRIMP

<400> 256  
 atggacaatc ttatcaccaa cgacaacatt atcctcgtca ctttcctgag tggattggca 60  
 gtcggctgct ccatgactat tgggctcgca ctggccatga acatgctcgt gaagtgcac 120  
 gacagaacta ctacttgcat ttcttgctca ccgtgggaga agaataagaa taagaagaac 180  
 aggaacggga gcaacaccga atccagtttc atcagccacg tccggttcaa cactccagat 240  
 aaggacctgg acatctctga acccatgctc aaatctacca cttacgatct ggccaatgtt 300  
 acccctcaag tcacaaaact ggtaacattt tctgggtccaa cctatgctag tccgcctaca 360  
 cccaggccag ttgccaatac acctcaacaa caaccaacaa gtacaaataa agaggaagaa 420

```

agtgtctata tgccaatgtc gagctgctcg tcgtcatttt cttctgacaa tagtcttcct 480
ctgccaacac cgccgccatc tccacctaga agcaatggcg gtgattacgt gtcatatgta 540
aacggagcac atctgaagct tccttcaaac ccaccttctc ccatcttcaa tatcaagaat 600
gaggaggagg aggatgataa tgtggaagaa catgtctacg aatacgtgcc agaagtacct 660
caacaatctc catctatcca gaagtgtatc caggaattga aggagatgaa acacaagaaa 720
aacaccctaa ccaggagcag tagtaacaac aacaacaatg ctccacgtat aacccaagtt 780
acgtttaaga aattcccacc taacaataat aacatgtggg agaatcatgt gtatggaaac 840
actacaattg tgtcttcac accttctcct acctttattc cttcacctaa aagtatcata 900
aggaaattgt catttaagag gaaacaataa                               930

```

&lt;210&gt; 257

&lt;211&gt; 305

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 257

```

Met Asp Asn Leu Ile Thr Asn Asp Asn Ile Ile Leu Val Thr Phe Leu
 1          5          10          15
Ser Gly Leu Ala Val Gly Cys Ser Met Thr Ile Gly Leu Ala Met Asn
 20          25          30
Met Leu Val Lys Cys Ile Asp Arg Thr Thr Thr Cys Ile Ser Cys Ser
 35          40          45
Pro Trp Glu Lys Asn Lys Asn Lys Lys Asn Arg Asn Gly Ser Asn Thr
 50          55          60
Glu Ser Ser Phe Ile Ser His Val Arg Phe Asn Thr Pro Asp Lys Asp
 65          70          75          80
Leu Asp Ile Ser Glu Pro Met Leu Lys Ser Thr Thr Tyr Asp Leu Ala
 85          90          95
Asn Val Thr Pro Gln Val Thr Lys Leu Val Thr Phe Ser Gly Pro Thr
 100          105          110
Tyr Asp Pro Thr Pro Arg Pro Val Ala Asn Thr Pro Gln Gln Gln Pro
 115          120          125
Thr Ser Thr Asn Lys Glu Glu Glu Ser Val Tyr Met Pro Met Ser Ser
 130          135          140
Cys Ser Ser Ser Phe Ser Ser Asp Asn Ser Leu Pro Leu Pro Thr Pro
 145          150          155          160
Pro Pro Ser Pro Pro Arg Ser Asn Gly Gly Asp Tyr Val Ser Tyr Val
 165          170          175
Asn Gly Arg His Leu Lys Leu Pro Ser Asn Pro Pro Ser Pro Ile Phe
 180          185          190
Asn Ile Lys Asn Glu Glu Gly Glu Asp Asp Asn Val Glu Glu His Val
 195          200          205
Tyr Glu Tyr Val Pro Glu Val Pro Gln Gln Ser Pro Ser Ile Gln Lys
 210          215          220
Cys Ile Gln Glu Leu Lys Glu Met Lys His Lys Lys Asn Thr Leu Thr
 225          230          235          240
Arg Ser Ser Ser Asn Asn Asn Asn Asn Ala Pro Arg Ile Thr Gln Val
 245          250          255
Thr Phe Lys Lys Phe Pro Pro Asn Asn Asn Asn Met Trp Glu Asn His
 260          265          270
Val Tyr Gly Asn Thr Thr Ile Val Ser Ser Thr Pro Ser Pro Thr Phe
 275          280          285
Ile Pro Ser Pro Lys Ser Ile Ile Arg Lys Leu Ser Phe Lys Arg Lys
 290          295          300
Gln
305

```

&lt;210&gt; 258

&lt;211&gt; 549

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 258

```

atgggagaaa gtattttcga tgctgtaagt ctggcaacaa ataatcctaa aaagtcaaac 60
tccagaaaca agaagttatt gcgggaactc aagaatatgc ggaaagattt tccttcaacc 120
tttctccagt gtcggatgat agattttcac ttttctggtg acattataga taaacattac 180
tgtcattctg taaacgtgcc agatgttggtg cctaatacaa tatttgcagt tttcttacct 240
gaagaggacc gtgccaataa ccccgggcta tacgattcta ttgaaggagt atgtataaca 300
gtcgaacaag gtgaattatg catcatcaac aagtcaagcg ttcacgagtt caatattctg 360
gtgtccttgc ataaggactt atttggtgaa gatattcttg atggaataga aactgcatca 420
agggagaagt ctcggtctat ccacctatat ctggaggctg ggcagagtat cagaaccca 480
atcccaagac cagaaggggac aaatactgtg aactacacta tcgttttttc taaccaagtg 540
acggtataa                                     549

```

&lt;210&gt; 259

&lt;211&gt; 180

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 259

```

Met Gly Glu Ser Ile Phe Asp Ala Val Ser Leu Ala Thr Asn Asn Pro
  1           5           10           15
Lys Lys Ser Asn Ser Arg Asn Lys Lys Leu Leu Arg Glu Leu Lys Asn
  20           25           30
Met Arg Lys Asp Phe Pro Ser Thr Phe Leu Gln Cys Arg Met Ile Asp
  35           40           45
Phe His Phe Ser Gly Asp Ile Ile Asp Lys His Tyr Cys His Ser Val
  50           55           60
Asn Val Pro Asp Val Val Pro Asn Thr Ile Phe Ala Val Phe Leu Pro
  65           70           75           80
Glu Glu Asp Arg Ala Asn Asn Pro Gly Asp Ser Ile Glu Gly Val Cys
  85           90           95
Ile Thr Val Glu Gln Gly Glu Leu Cys Ile Ile Asn Lys Ser Ser Val
  100          105          110
His Glu Phe Asn Ile Leu Val Ser Leu His Lys Asp Leu Phe Gly Glu
  115          120          125
Asp Ile Leu Asp Gly Ile Glu Thr Ala Ser Arg Glu Glu Ser Arg Ser
  130          135          140
Ile His Leu Tyr Leu Glu Ala Gly Gln Ser Ile Arg Thr Pro Ile Pro
  145          150          155          160
Arg Pro Glu Gly Thr Asn Thr Val Asn Tyr Thr Ile Val Phe Ser Asn
  165          170          175
Gln Val Thr Val
  180

```

&lt;210&gt; 260

&lt;211&gt; 3543

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 260

```

atggaagcgg catcaaatct gcgtataact gaaggtgcgg gagtgttgga tatcgacaac 60
gaggacgata tcaataataa tgttgattat agtaacttgt atgaagacga agaggatgag 120
gaggaaatga acgaggatga ggaggaggag gaggaggagg attacgaaga tgaagatgag 180
gacacgggag ttagaaatgg aagaaataaa gatcctccat cttctaaaaa acaaagttaa 240
tttgtgagag atgtcactaa tgacatgtac gatgatgatg atgaagaaga agaggaagag 300
gaggaagagg aagatgaaga gggagaagaa gggggtgaat atgacggaaa tctagaagac 360
gaggaagaag aaggagatga atatgaagat gacaatgaag gtgaagggga agaagatgag 420
gctgaccctg cgttattggc gctagcggca caacaagaag atgcgacaat tatacctgaa 480
aaccagtgga aaagtatagt gaacaccccc tcgccagtag ggccaaatag gcaagttctt 540

```

```

cccatgttga actttttact tgaaaatgtg aacgccatgg gcggatcagc aggtgaagaa 600
cagaagaaca aagaagatga taaccaacaa atagaacccg tagaagagga agaggatgaa 660
gaagaggaag aacaggagga ggaagaggaa gaggaagaag aacaggagga ggaagaggaa 720
gaaaaagaac ctatagaaca agaaaaaaat gaacccgaga aggatgaaga tgcaatagaa 780
aatgaaagcg tgcactctca tagagttgaa tccagcccta tgagtgaagg aggtaatgat 840
gatggaatgg attatttctt ctcttcaata gcagggtggcg gcaatgataa tgaagaggat 900
gaagaagagg atgaagaaga gggagaggaa gaggaggagg aggaacctgc acaaaaatct 960
gaagagcatg tagaaaactaa agagtctgtt caatctcaca cggaatatat tgaagaagag 1020
gaagaatatg aagaatatga agatgaatct cggcacacac tcgaggatga agaaataagt 1080
actatgcatc aatttaacaa tgcgcccagg gttcgaagat ctccccctcc agatatacaa 1140
gagtgcgagg atgcagttgt gttccctcca atcatgaaag agacagatat tctccccag 1200
ataaaggaac cttcaccaaaa agcacctaga atgttttcta ttcttggtag tggagggtgag 1260
gaacaatatg accaactaaa cgatatagca ccaccgcctg ttccatctat cgtgactttt 1320
cctccagaca atgaaaatggg agaagaaagt agagacatca tggaccaaga ttcgatgctg 1380
atgcctcctc ctctcctccc acctccacca ccacctcctc aacctcctca actcaaacct 1440
accaatatct ttcttcccct ccctccacct ccacctacaa atcagtcctt attttcaaac 1500
aacaacaaca atccatcctt tttgagtaca gtggttggaa aggttaacaa cacattaggt 1560
gggaaagagg ccgaagaaaag attacacaag actatggagt ctataatctt aaaaacaagg 1620
gtaaaaaact ttctagaaac aacaaagaac ctccaatgct ctgaactggg gaaagttgtg 1680
ttccaagatc cagaaaaacc agtaaaaacca tccgagaaaag taatggagcg ccttaaaaat 1740
atcatcgctg cagaattaac catgaaggca tttttagatt ctgctgcggt gacagacatt 1800
aaatctgccg agctgttcag gaaaacaaat gagaaattgg agttgtttca gaggaagcaa 1860
atcatgtcca accctctttt ttcagcagca tacgcgtcaa cttatataat gggggaaaga 1920
gctagcaaaa taagaccatc gactcctgct ccttctctta aaaaggttga aagtatatct 1980
gaattaaacg aggatgaaac ttccatgtct tcatctgctg gtggagtatg tgctgaaggc 2040
gacgagtcta ttgctggagg aggaggaggag gaggaggaga ggtggtggag 2100
cattcttcat tttatagtaa tcaaactcaa gcaaatttgc acatggaact gataaatata 2160
ctgaaagaag acgacgataa tcaaccatgt caaacgtata agcttggtca aagactggcg 2220
ttcctaaaca acctcatatc ctttaaaaca tcaagtgtcg tttcttggtc tagattagtc 2280
aatatgcttt cggacatagt gaccaaggca tcagtggcac tgttcggaga caccaacaaa 2340
gcccagaggg attttggaaa acatcaaact gaaacaaatg atgtatcaga tttgtctacc 2400
tcacttaaac taataacagat gagtaaaaga tctgcaaaaca taatggaaga aatgggggta 2460
ggttctatag gggcagaaat ttgtttcggg gcaatttcta caatcataga gaaacacatc 2520
aacaactat gtatggacgt ggggaaggta acaattttct tgaacatacc aattgtacta 2580
ttaaattggc caaaagagtt cactttgtca aaagattata aagttcttct tttggatagt 2640
atttctagtt gttcttctaa aatggctgtc cctccattt acgtcttaaa cagtatacaa 2700
tttgataagg cagtcgatga agaggatgaa gatggtaatg gaagtgaggc agagaaaaga 2760
agtgaagacg gcaacatggt ttcagagaaag gacaagaagg aagcaattcg tcgagtatac 2820
gataatataa gatacgggga cagtaatgac cgtaacatcat taaaccactt tttcggtgac 2880
gcgtattctg gagtgagtaa caataacagc aagaatagta tgtttgatct ccagacacaa 2940
ggcgggggaa ggtttggtgt agcatacagt gcaggctcat caatcatcga acacagatcc 3000
cctatttttg ataatgcatt aaatacacta gtcaatttca tggacaagag gaaacacttg 3060
ctaagcgcag tagtgatcaa acttttaaaag aaagctaaat tgtccattga agtgactgc 3120
ataaaatata agcataatca agcatctgag aaatacaata aaaagggtaa gcacggaaaa 3180
tctacatctg ttgtgcctat gcgaaaactta atgtaccgtc cttctaaaaa tcaagatggt 3240
tctccctcca cccagcagc agcaacagca atggacgtgc ctagcagtgt atcttctcat 3300
gttggttaga aaagaacgtt ttctttttca aatgacatca attccaacat gagtgcgct 3360
agcagtggt atattgacca agaattcttc acaccttcta gacggaggac ttttatggac 3420
cttttgaaata acaaatctag cgtcaattct ctagcaaagc aagtgaaaag aatgaagcac 3480
acaaaatatt acaattcttc atccaattca gaagacgacg atgaagacga ccaatacagag 3540
taa 3543

```

<210> 261  
<211> 1174  
<212> PRT  
<213> SHRIMP

<400> 261  
Met Glu Ala Asn Leu Arg Ile Thr Glu Gly Ala Gly Val Leu Asp Ile  
1 5 10 15  
Asp Asn Glu Asp Asp Ile Asn Asn Asn Val Asp Tyr Ser Asn Leu Tyr

			20					25					30			
Glu	Asp	Glu	Glu	Asp	Glu	Glu	Glu	Met	Asn	Glu	Asp	Glu	Glu	Glu	Glu	
		35					40						45			
Glu	Glu	Glu	Asp	Tyr	Glu	Asp	Glu	Asp	Glu	Asp	Thr	Gly	Val	Arg	Asn	
	50					55					60					
Gly	Arg	Asn	Lys	Asp	Pro	Pro	Ser	Ser	Lys	Lys	Gln	Ser	Lys	Phe	Val	
65					70					75					80	
Arg	Asp	Val	Thr	Asn	Asp	Met	Tyr	Asp	Asp	Asp	Asp	Glu	Glu	Glu	Glu	
				85					90					95		
Glu	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Glu	Gly	Glu	Glu	Gly	Gly	Glu	Tyr	
			100					105					110			
Asp	Gly	Asn	Leu	Glu	Asp	Glu	Glu	Glu	Glu	Gly	Asp	Glu	Tyr	Glu	Asp	
		115					120					125				
Asp	Asn	Glu	Gly	Glu	Gly	Glu	Glu	Asp	Glu	Ala	Asp	Pro	Ala	Leu	Leu	
	130					135					140					
Ala	Ala	Gln	Gln	Glu	Asp	Ala	Thr	Ile	Ile	Pro	Glu	Asn	Gln	Trp	Lys	
145					150					155					160	
Ser	Ile	Val	Asn	Thr	Pro	Ser	Pro	Val	Gly	Pro	Asn	Arg	Gln	Val	Leu	
				165					170					175		
Pro	Met	Leu	Asn	Phe	Leu	Leu	Glu	Asn	Val	Asn	Ala	Met	Gly	Gly	Ser	
			180					185				190				
Ala	Gly	Glu	Glu	Gln	Lys	Asn	Lys	Glu	Asp	Asp	Asn	Gln	Gln	Ile	Glu	
		195					200					205				
Pro	Val	Glu	Glu	Glu	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	
	210					215					220					
Glu	Glu	Glu	Glu	Glu	Glu	Gln	Glu	Glu	Glu	Glu	Glu	Glu	Lys	Glu	Pro	
225					230					235					240	
Ile	Glu	Gln	Glu	Lys	Asn	Glu	Pro	Glu	Lys	Asp	Glu	Asp	Ala	Ile	Glu	
				245					250				255			
Asn	Glu	Ser	Val	His	Ser	His	Arg	Val	Glu	Ser	Ser	Pro	Met	Ser	Glu	
			260					265					270			
Gly	Gly	Asn	Asp	Asp	Gly	Met	Asp	Tyr	Phe	Phe	Ser	Ser	Ile	Ala	Gly	
		275					280					285				
Gly	Gly	Asn	Asp	Asn	Glu	Glu	Asp	Glu	Glu	Glu	Asp	Glu	Glu	Glu	Gly	
	290					295					300					
Glu	Glu	Glu	Glu	Glu	Glu	Glu	Pro	Ala	Gln	Lys	Ser	Glu	Glu	His	Val	
305						310				315					320	
Glu	Thr	Lys	Glu	Ser	Val	Gln	Ser	His	Thr	Glu	Tyr	Ile	Glu	Glu	Glu	
				325					330					335		
Glu	Glu	Tyr	Glu	Glu	Tyr	Glu	Asp	Glu	Ser	Arg	His	Thr	Leu	Glu	Asp	
			340					345				350				
Glu	Glu	Ile	Ser	Thr	Met	His	Gln	Phe	Asn	Asn	Ala	Pro	Arg	Val	Arg	
		355					360					365				
Arg	Ser	Pro	Pro	Pro	Asp	Ile	Gln	Glu	Cys	Glu	Asp	Ala	Val	Val	Phe	
	370					375				380						

Asn	Thr	Leu	Gly	Gly	Lys	Glu	Ala	Glu	Glu	Arg	Leu	His	Lys	Thr	Met
		515					520					525			
Glu	Ser	Ile	Ile	Leu	Lys	Thr	Arg	Val	Lys	Thr	Leu	Leu	Glu	Thr	Thr
		530					535				540				
Lys	Asn	Leu	Gln	Cys	Ser	Glu	Leu	Val	Lys	Val	Val	Phe	Gln	Asp	Pro
545					550					555					560
Glu	Asn	Pro	Val	Lys	Pro	Ser	Glu	Lys	Val	Met	Glu	Arg	Leu	Lys	Asn
				565					570					575	
Ile	Ile	Ala	Ala	Glu	Leu	Thr	Met	Lys	Ala	Phe	Leu	Asp	Ser	Ala	Ala
		580						585					590		
Val	Thr	Asp	Ile	Lys	Ser	Ala	Glu	Leu	Phe	Arg	Lys	Thr	Asn	Glu	Lys
		595					600					605			
Leu	Glu	Leu	Phe	Gln	Arg	Lys	Gln	Ile	Met	Ser	Asn	Pro	Leu	Phe	Ser
		610					615					620			
Ala	Ala	Tyr	Ala	Ser	Thr	Tyr	Ile	Met	Gly	Glu	Arg	Ala	Ser	Lys	Ile
625					630					635					640
Arg	Pro	Ser	Thr	Pro	Ala	Pro	Ser	Leu	Lys	Lys	Val	Glu	Ser	Ile	Ser
				645					650					655	
Glu	Leu	Asn	Glu	Asp	Glu	Thr	Ser	Met	Ser	Ser	Ser	Ala	Gly	Gly	Val
			660					665					670		
Cys	Ala	Glu	Gly	Asp	Glu	Ser	Ile	Ala	Gly	Gly	Gly	Gly	Gly	Gly	Gly
		675					680					685			
Gly	Gly	Gly	Gly	Glu	Val	Val	Glu	His	Ser	Ser	Phe	Tyr	Ser	Asn	Gln
		690				695					700				
Thr	Gln	Ala	Asn	Leu	His	Met	Glu	Leu	Ile	Asn	Ile	Leu	Lys	Glu	Asp
705					710					715					720
Asp	Asp	Asn	Gln	Pro	Cys	Gln	Thr	Tyr	Lys	Leu	Gly	Gln	Arg	Leu	Ala
			725						730					735	
Phe	Leu	Asn	Asn	Leu	Ile	Ser	Phe	Lys	Thr	Ser	Ser	Ala	Val	Ser	Trp
		740						745					750		
Ser	Arg	Leu	Val	Asn	Met	Leu	Ser	Asp	Ile	Val	Thr	Lys	Ala	Ser	Val
		755					760					765			
Phe	Gly	Asp	Thr	Asn	Lys	Ala	Gln	Glu	Asp	Phe	Glu	Lys	His	Gln	Thr
		770				775					780				
Glu	Thr	Asn	Asp	Val	Ser	Asp	Leu	Ser	Thr	Ser	Ser	Lys	Leu	Lys	Gln
785					790					795					800
Met	Ser	Lys	Glu	Ser	Ala	Asn	Ile	Met	Glu	Glu	Met	Gly	Leu	Gly	Ser
				805					810					815	
Ile	Gly	Ala	Glu	Ile	Cys	Phe	Gly	Ala	Ile	Ser	Thr	Ile	Ile	Glu	Lys
		820						825					830		
His	Ile	Asn	Lys	Leu	Cys	Met	Asp	Val	Gly	Arg	Leu	Thr	Ile	Phe	Leu
		835					840					845			
Asn	Ile	Pro	Ile	Val	Leu	Leu	Asn	Trp	Pro	Lys	Glu	Phe	Thr	Leu	Ser
		850				855					860				
Lys	Asp	Tyr	Lys	Val	Leu	Leu	Leu	Asp	Ser	Ile	Ser	Ser	Cys	Ser	Ser
865					870					875					880
Lys	Met	Ala	Val	Pro	Pro	Ile	Tyr	Val	Leu	Asn	Ser	Ile	Gln	Phe	Asp
				885					890					895	
Lys	Ala	Val	Asp	Glu	Glu	Asp	Glu	Asp	Gly	Asn	Gly	Ser	Glu	Ala	Glu
			900					905					910		
Lys	Arg	Ser	Glu	Asp	Gly	Asn	Met	Phe	Ser	Glu	Lys	Asp	Lys	Lys	Glu
		915					920					925			
Ala	Ile	Arg	Arg	Val	Tyr	Asp	Asn	Ile	Arg	Tyr	Gly	Asp	Ser	Asn	Asp
		930				935					940				
Arg	Thr	Ser	Leu	Asn	His	Phe	Phe	Gly	Asp	Ala	Tyr	Ser	Gly	Val	Ser
945					950					955					960
Asn	Asn	Asn	Ser	Lys	Asn	Ser	Met	Phe	Asp	Leu	Gln	Thr	Gln	Gly	Gly
				965					970					975	
Gly	Arg	Phe	Gly	Val	Ala	Tyr	Ser	Ala	Gly	Ser	Ser	Ile	Ile	Glu	His
			980					985					990		
Arg	Ser	Pro	Ile	Phe	Asp	Asn	Ala	Leu	Asn	Thr	Leu	Val	Asn	Phe	Met

995 1000 1005  
 Asp Lys Arg Lys His Leu Leu Ser Ala Val Val Ile Lys Leu Leu Lys  
 1010 1015 1020  
 Lys Ala Lys Leu Ser Ile Glu Val Tyr Cys Ile Lys Tyr Lys Leu Asn  
 1025 1030 1035 1040  
 Gln Ala Ser Glu Lys Tyr Asn Lys Lys Gly Lys His Gly Lys Ser Thr  
 1045 1050 1055  
 Ser Val Val Pro Met Arg Asn Leu Met Tyr Arg Pro Ser Lys Asn Gln  
 1060 1065 1070  
 Asp Val Ser Pro Ser Thr Pro Ala Ala Ala Thr Ala Met Asp Val Pro  
 1075 1080 1085  
 Ser Ser Val Ser Ser His Val Gly Arg Lys Arg Thr Phe Ser Phe Ser  
 1090 1095 1100  
 Asn Asp Ile Asn Ser Asn Met Ser Ser Ala Ser Ser Val Tyr Ile Asp  
 1105 1110 1115 1120  
 Gln Glu Ser Ser Thr Pro Ser Arg Arg Arg Thr Phe Met Asp Leu Leu  
 1125 1130 1135  
 Asn Asn Lys Ser Ser Val Asn Ser Leu Ala Lys Gln Val Lys Arg Met  
 1140 1145 1150  
 Lys His Thr Lys Tyr Tyr Asn Ser Ser Asn Ser Glu Asp Asp Asp  
 1155 1160 1165  
 Glu Asp Asp Gln Tyr Glu  
 1170

<210> 262  
 <211> 786  
 <212> DNA  
 <213> SHRIMP

<400> 262  
 atgtctaagt ggcgaactat aagcgatgag aggttgatcc tcatccttga taaaattgta 60  
 gaaagacgtg gtgttttctaa tctatctgaa ttgttgatac accccataac caaacacata 120  
 aacgaattgt tgaagaacac tgtaagacat ggagacagag tttacatgaa ggatgcagaa 180  
 ctggatgtga gatctcgctt agaagacata aaaaaggatt gtgtttttaa ggcaattgaa 240  
 aaacaaggaa tagatgttag acaaataata actgattact tggctaaacg aaaactaacg 300  
 caaaatcttg tacattggta tcggcccccata atattcttgca cagatataga cgaaaaaatt 360  
 caacaagaaa ctggtcaagt agggcggtgt agtgttgcta cgtacaattt gagaattggt 420  
 ggtgacgatg gagaatttac aaggtagcat ttctccattc ccttgggaga tttttaaata 480  
 acggcaaaat tgtttcgttc cataaatgat gaggatgtag atgcagtgat tcttgtgtct 540  
 cgtagtgcag tagttaatga cgtgctaagc tttgaagcat ttaatcgaac aggagaacgc 600  
 gtagtcatat tctttaatgt gattgttgaa gggaagagta aagatattga tattgtatgt 660  
 aaatctagat ataaacacac ccatatacta aacggagaat ctgcaacata cgctgtttaa 720  
 cgtataaaaa gaggcgatac aaggagcat atattgtttg caatcactgc ttttaaggag 780  
 gagtaa 786

<210> 263  
 <211> 261  
 <212> PRT  
 <213> SHRIMP

<400> 263  
 Met Ser Asn Gly Ala Thr Ile Ser Asp Glu Arg Leu Ile Leu Ile Leu  
 1 5 10 15  
 Asp Lys Ile Val Glu Arg Arg Gly Val Ser Asn Leu Ser Glu Leu Leu  
 20 25 30  
 Ile His Pro Ile Thr Lys His Ile Asn Glu Leu Leu Lys Asn Thr Val  
 35 40 45  
 Arg His Gly Asp Arg Val Tyr Met Lys Asp Ala Glu Leu Asp Val Arg  
 50 55 60  
 Ser Arg Leu Glu Asp Ile Lys Lys Asp Cys Val Leu Lys Ala Ile Glu

```

65          70          75          80
Lys Gln Gly Ile Asp Val Arg Gln Ile Ile Thr Asp Tyr Leu Ala Lys
      85          90          95
Arg Lys Leu Thr Gln Asn Leu Val His Trp Tyr Arg Pro Pro Ile Ser
      100          105          110
Cys Thr Asp Ile Asp Glu Lys Ile Gln Gln Glu Thr Gly Gln Val Gly
      115          120          125
Arg Cys Ser Val Ala Thr Tyr Asn Leu Arg Ile Gly Gly Asp Asp Gly
      130          135          140
Glu Phe Thr Arg Tyr Asp Phe Ser Ile Pro Leu Gly Asp Phe Lys Ile
      145          150          155          160
Thr Ala Lys Leu Phe Arg Ser Ile Asn Asp Glu Asp Val Asp Ala Val
      165          170          175
Ile Leu Val Ser Arg Ser Asp Val Val Asn Asp Val Leu Ser Phe Glu
      180          185          190
Ala Phe Asn Arg Thr Gly Glu Arg Val Val Ile Phe Phe Asn Val Ile
      195          200          205
Val Glu Gly Lys Ser Lys Asp Ile Asp Ile Val Cys Lys Ser Arg Tyr
      210          215          220
Lys His Thr His Ile Leu Asn Gly Glu Ser Ala Thr Tyr Ala Val Lys
      225          230          235          240
Arg Ile Lys Arg Gly Asp Thr Arg Asp Asp Ile Leu Phe Ala Ile Thr
      245          250          255
Ala Phe Lys Glu Glu
      260

```

<210> 264  
 <211> 852  
 <212> DNA  
 <213> SHRIMP

```

<400> 264
atgtcgtcta acggagatga gcctgctgtg actgaagctg aaatcgcttc agtggaggct 60
caattgggag ctgctcacca tgacaattct tggatcacaa gaaagagtga ccaattaaag 120
tatcgcttag gtgcaattgc ctattcggtg gcaaaaaatg cctctataaa atatatagag 180
gatcaagtaa ggcaagaaat caatagccat ttaactaatg taatgacttt tgaacatctt 240
tacgaagacg ctttcaatcc tggtatctgt gaagcaattt ttgagaaagg aataccagtg 300
gttatggaaa aagtatacga tgtgaataga cggatcatgg aaccagggg agatttcata 360
actgaaattt taaaagagga gcggtggaga agatatatac ctggttttta tcatacatca 420
ttttctttca agtacaatac tattgccttt accgactctt caacttcatt tagtgtacca 480
ataaacgata aacacatggt atcaatcaact cccctggag ctgctcaagg ggatttaatt 540
gatttaagtt tatcgttcaa aatagattct tcagccaaaa ctctcacgtt agaatttaac 600
cgcaaatcca cgttcgctgg tattgtaaac agacccaaaa gtgtagtgat attatcaaat 660
ctaagaaata gtgattcttc tgataacata ggtgattatc taaagagaaa tgatcctata 720
tatattagtc atgatacaaa tggcataatc aaccatccg aggattcggc ctctctcatt 780
acaattcaca tgctgaaat cgaaaacgcg agtgatgatt tatacataga tttcaatctg 840
tttgtttttt ag                                         852

```

<210> 265  
 <211> 283  
 <212> PRT  
 <213> SHRIMP

```

<400> 265
Met Ser Ser Asn Gly Asp Glu Pro Ala Val Thr Glu Ala Glu Ile Ala
1          5          10          15
Ser Val Glu Ala Gln Leu Gly Ala Ala His His Asp Asn Ser Trp Ile
      20          25          30
Thr Arg Lys Ser Asp Gln Leu Lys Tyr Arg Leu Gly Ala Ile Ala Tyr
      35          40          45

```



Ser Val Ala Lys Asn Ala Ser Ile Lys Tyr Ile Glu Asp Gln Val Arg  
 50 55 60  
 Gln Glu Ile Asn Ser His Leu Thr Asn Val Met Thr Phe Glu His Leu  
 65 70 75 80  
 Tyr Glu Asp Ala Phe Asn Pro Val Ile Cys Glu Ala Ile Phe Glu Lys  
 85 90 95  
 Gly Ile Pro Val Val Met Glu Lys Val Tyr Asp Val Asn Arg Arg Ile  
 100 105 110  
 Met Glu Pro Arg Glu Asp Phe Ile Thr Glu Ile Leu Lys Glu Glu Arg  
 115 120 125  
 Trp Arg Arg Tyr Ile Pro Gly Phe Tyr His Thr Ser Phe Ser Phe Lys  
 130 135 140  
 Tyr Asn Thr Ile Ala Phe Thr Asp Ser Ser Thr Ser Phe Ser Val Pro  
 145 150 155 160  
 Ile Asn Asp Lys His Met Leu Ser Ile Thr Pro Pro Gly Ala Ala Gln  
 165 170 175  
 Gly Asp Leu Ile Asp Leu Ser Leu Ser Phe Lys Ile Asp Ser Ser Ala  
 180 185 190  
 Lys Thr Leu Thr Leu Glu Phe Asn Arg Lys Ser Thr Phe Ala Gly Ile  
 195 200 205  
 Val Asn Arg Pro Lys Ser Val Val Ile Leu Ser Asn Leu Arg Asn Ser  
 210 215 220  
 Asp Ser Ser Asp Asn Ile Gly Asp Tyr Leu Lys Arg Asn Asp Pro Ile  
 225 230 235 240  
 Tyr Ile Ser His Asp Thr Asn Gly Ile Ile Asn Pro Ser Glu Asp Ser  
 245 250 255  
 Ala Ser Leu Ile Thr Ile His Met Pro Glu Ile Glu Asn Ala Ser Asp  
 260 265 270  
 Asp Leu Tyr Ile Asp Phe Asn Leu Phe Val Phe  
 275 280

<210> 266  
 <211> 1302  
 <212> DNA  
 <213> SHRIMP

<400> 266  
 atggcacttt caaacaatgg aggaatatac attgtttttg cggttattgt tttggtaata 60  
 ggagcttcta ttgccctctt ctttgctatc tcgggcgtag ggaaggggaac tctacattca 120  
 aatgccaaaa caaaaaagag taagaaatat aaattagact ctaaaatacac tgacgatgat 180  
 gaaaaaactg acgacgataa taataataat ggaggaggag ggggaggaac agttgatgtt 240  
 atcaatgaga cagcgcttca acgtcaaacg agagagcatt ttgcaagaac tcttgaaaaa 300  
 gctgaggatg aattcttcac caaattagca gatcaggaat ttgacacata caaatcagaa 360  
 aacgtatggt taataaagga taaaataaca gatggaaaag tttcaatccc tgaagggtgac 420  
 ataaacgtcc ccgatgtcgg acaggcaatt gctgatgaaa acttgttcga tctcataggg 480  
 acgaaccatg acgaagtcaa ggaaacgatg gatgaagttg ttgcacaaaa atctaccaat 540  
 atcacttacg aacaactcgt aatagacttg accaatattt tattgttttg tacagtaaca 600  
 gttgatcctt ctgatgaaaa tggggatgaa agcctacaga gatcaacaga cccagacgca 660  
 gaaatggtga tgttgacaac aacaccttct tcacaactag ctagacaaca acaacctcct 720  
 caacctacac ctgattacct tgcccgggtac tcaaaggaat tgggtgataa taatatacga 780  
 ggagggtttta tcagtgatcg tgatatgcgc acttggaag gacgaatgtc tgtacatgtc 840  
 aacatgaaac agaggacatt taatgttatt agtgcagcaa cgaatctgga ttctctacaa 900  
 gttggattag aacccgtgct aaaaaaaca ggtagagcag ctgtgggagg acgtattgaa 960  
 aaagcccgga tagagttttc atttgtagta gaaggtaacc gtgtacgggt atacgctaca 1020  
 aacaaaacag aggactgttt ttgtagttta ctccccaact gttataatgt taaaagggca 1080  
 tcagactatt ggataagctc tgcaagcaca gctaaggaaa aaacgtactt gtttattgct 1140  
 aataaaaaatg atgaaacaag tttcttctat aactttgagg aagggtgttg agaaattgac 1200  
 ctggacattt ttatgacaat agattgtgca cctaactctt ctttcattaa aaatttacca 1260  
 agacctatta cagataataa tataatggtt gcaactgtcat aa 1302

<210> 267  
 <211> 431  
 <212> PRT  
 <213> SHRIMP

<400> 267

Met	Ala	Leu	Ser	Asn	Asn	Gly	Gly	Ile	Tyr	Ile	Val	Phe	Ala	Val	Ile
1				5					10					15	
Val	Leu	Val	Ile	Gly	Ala	Ser	Ile	Ala	Leu	Phe	Phe	Ala	Ile	Ser	Gly
			20					25					30		
Val	Gly	Lys	Gly	Thr	Leu	His	Ser	Asn	Ala	Lys	Thr	Lys	Lys	Ser	Lys
		35					40					45			
Lys	Tyr	Lys	Leu	Asp	Ser	Lys	Tyr	Thr	Asp	Asp	Asp	Glu	Lys	Thr	Asp
	50					55					60				
Asp	Asp	Asn	Asn	Asn	Asn	Gly	Gly	Gly	Gly	Gly	Gly	Thr	Val	Asp	Val
65					70					75					80
Ile	Asn	Glu	Thr	Ala	Leu	Gln	Arg	Gln	Thr	Arg	Glu	His	Phe	Ala	Arg
				85					90					95	
Thr	Leu	Glu	Lys	Ala	Glu	Asp	Glu	Phe	Phe	Thr	Lys	Leu	Ala	Asp	Gln
			100					105					110		
Glu	Phe	Asp	Thr	Tyr	Lys	Ser	Glu	Asn	Val	Trp	Leu	Ile	Lys	Asp	Lys
		115					120					125			
Ile	Thr	Asp	Gly	Lys	Val	Ser	Ile	Pro	Glu	Gly	Asp	Ile	Asn	Val	Pro
	130					135					140				
Asp	Val	Gly	Gln	Ala	Ile	Ala	Asp	Glu	Asn	Leu	Phe	Asp	Leu	Ile	Gly
145					150					155					160
Thr	Asn	His	Asp	Glu	Val	Lys	Glu	Thr	Met	Asp	Glu	Val	Val	Ala	Gln
				165					170					175	
Lys	Ser	Thr	Asn	Ile	Thr	Tyr	Glu	Gln	Leu	Val	Ile	Asp	Leu	Thr	Asn
			180					185					190		
Ile	Leu	Leu	Phe	Gly	Thr	Val	Thr	Val	Asp	Pro	Ser	Asp	Glu	Asn	Gly
		195					200					205			
Asp	Glu	Ser	Leu	Gln	Arg	Ser	Thr	Asp	Pro	Asp	Ala	Glu	Met	Val	Met
	210					215					220				
Leu	Thr	Thr	Thr	Pro	Ser	Ser	Gln	Leu	Ala	Arg	Gln	Gln	Gln	Pro	Pro
225					230					235					240
Gln	Pro	Thr	Pro	Asp	Tyr	Leu	Ala	Arg	Tyr	Ser	Lys	Glu	Leu	Val	Ile
				245					250					255	
Asn	Asn	Ile	Arg	Gly	Gly	Phe	Ile	Ser	Asp	Arg	Asp	Met	Arg	Thr	Trp
			260					265					270		
Gln	Gly	Arg	Met	Ser	Val	His	Val	Asn	Met	Lys	Gln	Arg	Thr	Phe	Asn
		275					280					285			
Val	Ile	Ser	Ala	Ala	Thr	Asn	Leu	Asp	Ser	Leu	Gln	Val	Gly	Leu	Glu
	290					295					300				
Pro	Val	Leu	Gln	Lys	Gln	Gly	Arg	Ala	Ala	Val	Gly	Gly	Arg	Ile	Glu
305					310					315					320
Lys	Ala	Arg	Ile	Glu	Phe	Ser	Phe	Val	Val	Glu	Gly	Asn	Arg	Val	Arg
				325					330					335	
Val	Tyr	Ala	Thr	Asn	Lys	Thr	Glu	Asp	Cys	Phe	Cys	Ser	Leu	Leu	Pro
			340					345					350		
Asn	Cys	Tyr	Asn	Val	Lys	Lys	Ala	Ser	Asp	Tyr	Trp	Ile	Ser	Ser	Ala
		355					360					365			
Ser	Thr	Ala	Lys	Glu	Lys	Thr	Tyr	Leu	Phe	Ile	Ala	Asn	Lys	Asn	Asp
	370					375					380				
Glu	Thr	Ser	Phe	Phe	Tyr	Asn	Phe	Glu	Glu	Gly	Val	Glu	Glu	Ile	Asp
385					390					395					400
Leu	Asp	Ile	Phe	Met	Thr	Ile	Asp	Cys	Ala	Pro	Asn	Leu	Pro	Phe	Ile
				405					410					415	
Lys	Asn	Leu	Pro	Arg	Pro	Ile	Thr	Asp	Asn	Asn	Ile	Met	Val	Ser	
			420					425					430		

WO 01/38351

PCT/US00/28888

359

<210> 268  
 <211> 207  
 <212> DNA  
 <213> SHRIMP

<400> 268  
 atgtctgata tgaccagaaa catcatcgtc ggcttggccg ttgtcgatcat cgcattgagc 60  
 atggtcgctt tcatgctttc tgttactcct gcacttaccg gattcctcct aggtttgggt 120  
 gtatcagcac taggagttac actcttttga tgtccacta tgaaatctcc agggggagga 180  
 aatgctacaa tcaaccccgt ggcataa 207

<210> 269  
 <211> 68  
 <212> PRT  
 <213> SHRIMP

<400> 269  
 Met Ser Asp Met Thr Arg Asn Ile Ile Val Gly Leu Ala Val Val Val  
 1 5 10 15  
 Ile Ala Leu Ser Met Val Ala Phe Met Leu Ser Val Thr Pro Ala Leu  
 20 25 30  
 Thr Gly Phe Leu Leu Gly Leu Gly Val Ser Ala Leu Gly Val Thr Leu  
 35 40 45  
 Phe Gly Cys Pro Thr Met Lys Ser Pro Gly Gly Gly Asn Ala Thr Ile  
 50 55 60  
 Asn Pro Val Ala  
 65

<210> 270  
 <211> 552  
 <212> DNA  
 <213> SHRIMP

<400> 270  
 atgttccaga aatggtttga atcgtttctg gattcttccc gacctagata tctggatacg 60  
 acatgtgtat gctcagttta ttcataatttt tccccttgct ggaaacatat aaaattttcc 120  
 acatcgcatt cgcatgaggg tataaaaatc catcctccat caatattgaa ccataataact 180  
 tctcttccca ccagtggaaa gatgtgtaac caccaccaca agagattgta cctgagcact 240  
 gacgaccata cgagatggta tgacaaaaat acatcatgca tctatcttga agatattgga 300  
 ggagtacaat tcatgggtata cgagttccat ctaacaccaa agaacaatca actattctcc 360  
 ttccctgttc acctccaaat acacaacagg aatactgaga aaacatccct cctcgtattt 420  
 gaaaatgaag aagatatgag ggtcaggaac attcatccaa aatccaagat attgatcccc 480  
 gtgtccaaag acacagtgtc tgtagagaat gggtttcggt acaagggtgaa aattgtatta 540  
 tcaaacaat aa 552

<210> 271  
 <211> 183  
 <212> PRT  
 <213> SHRIMP

<400> 271  
 Met Phe Gln Lys Trp Phe Glu Ser Phe Leu Asp Ser Ser Arg Pro Arg  
 1 5 10 15  
 Tyr Leu Asp Thr Thr Cys Val Cys Ser Val Tyr Ser Tyr Phe Ser Pro  
 20 25 30  
 Cys Arg Lys His Ile Lys Phe Ser Thr Ser His Ser His Glu Gly Ile  
 35 40 45  
 Lys Ile His Pro Pro Ser Ile Leu Asn His Asn Thr Ser Ser Pro Thr  
 50 55 60

WO 01/38351

360

PCT/US00/28888

Ser Gly Lys Met Cys Asn His His His Lys Arg Leu Tyr Leu Ser Thr  
 65 70 75 80  
 Asp Asp His Thr Arg Trp Tyr Asp Lys Asn Thr Ser Cys Ile Tyr Leu  
 85 90 95  
 Glu Asp Ile Gly Gly Val Gln Phe Met Val Tyr Glu Phe His Leu Thr  
 100 105 110  
 Pro Lys Asn Asn Gln Leu Phe Ser Phe Pro Val His Leu Gln Ile His  
 115 120 125  
 Asn Arg Asn Thr Glu Lys Thr Ser Leu Leu Val Phe Glu Asn Glu Glu  
 130 135 140  
 Asp Met Arg Val Arg Asn Ile His Pro Lys Ser Lys Ile Leu Ile Pro  
 145 150 155 160  
 Val Ser Lys Asp Thr Val Leu Val Glu Asn Gly Phe Arg Tyr Lys Val  
 165 170 175  
 Lys Ile Val Leu Ser Asn Lys  
 180

<210> 272  
 <211> 684  
 <212> DNA  
 <213> SHRIMP

<400> 272  
 atggactcac ttataagcaa attggaaaac atattctcca ttgccgagca ggacttttttc 60  
 aacgcggaca gcatgttcat gcaaaccatg ctctcccta ccgacgccat gttcaccgat 120  
 tgcgagtctc cattgtacaa gaacaagtcg ggaggggaaga atattgtcac cgatgttgga 180  
 gagagtgtac tgtcttcttc ttcggacgaa aagatgagct tcaaagtgtc gtcccacgta 240  
 ctccaggcgat tccctgtcct acttcattgc aactacaagc agacgaatac gcccctgtgg 300  
 aaggagcttt acaagcacgg gaagtttgcc ctctcggcg acctggtgtt attctccaac 360  
 ccattccacc ccaatatccc cgccatgccg ttgataaat cccccatttg tgacaccact 420  
 ggaaaatcta tcattatgag tgaagtcatg accaaggagc ttttgtacaa gttggccgac 480  
 aaagatatgg gccatttctt tgctgtattg aatgtaacta accccattac tggagattct 540  
 ttctccatt actttgcagg aggaaatacc atgagggatg gggaagggga taaaatctgc 600  
 acatctgctg atgtgttacg cattattgct gagataacaa tacagaaaac tggcaagatg 660  
 ccatatgaat tgatgaagaa ataa 684

<210> 273  
 <211> 227  
 <212> PRT  
 <213> SHRIMP

<400> 273  
 Met Asp Ser Leu Ile Ser Lys Leu Glu Asn Ile Phe Ser Ile Ala Glu  
 1 5 10 15  
 Gln Asp Phe Phe Asn Ala Asp Ser Met Phe Met Gln Thr Met Leu Leu  
 20 25 30  
 Pro Thr Asp Ala Met Phe Thr Asp Cys Glu Ser Pro Leu Tyr Lys Asn  
 35 40 45  
 Lys Ser Gly Gly Lys Asn Ile Val Thr Asp Val Gly Glu Ser Val Leu  
 50 55 60  
 Ser Ser Ser Ser Asp Glu Lys Met Ser Phe Lys Val Leu Ser His Val  
 65 70 75 80  
 Leu Arg Arg Phe Pro Val Leu Leu His Cys Asn Tyr Lys Gln Thr Asn  
 85 90 95  
 Thr Pro Leu Trp Lys Glu Leu Tyr Lys His Gly Lys Phe Ala Leu Leu  
 100 105 110  
 Gly Asp Leu Val Leu Phe Ser Asn Pro Phe His Pro Asn Ile Pro Ala  
 115 120 125  
 Met Pro Phe Asp Lys Ser Pro Ile Cys Asp Thr Thr Gly Lys Ser Ile  
 130 135 140

Ile Met Ser Glu Val Met Thr Lys Glu Leu Leu Tyr Lys Leu Ala Asp  
 145 150 155 160  
 Lys Asp Ile Gly Gln Phe Phe Ala Val Leu Asn Val Thr Asn Pro Ile  
 165 170 175  
 Thr Gly Asp Ser Phe Leu His Tyr Phe Ala Gly Gly Asn Thr Met Arg  
 180 185 190  
 Asp Gly Glu Gly Asp Lys Ile Cys Thr Ser Ala Asp Val Leu Arg Ile  
 195 200 205  
 Ile Ala Glu Ile Thr Ile Gln Lys Thr Gly Lys Met Pro Tyr Glu Leu  
 210 215 220  
 Met Lys Lys  
 225

<210> 274  
 <211> 2193  
 <212> DNA  
 <213> SHRIMP

<400> 274  
 atggagggtg gggaccaacg gacaaaactt acgccagcaa ccgtgatggg actttaccaa 60  
 tcgaaaacgc caggagaagg agaaggagga gaaggaggag ggcaattcaa gataccttca 120  
 gccatagctg tgaaatcttg ttgctctaaa aacgctactc gccgatcccc tccctcagat 180  
 tctccttatt ctcttaggcc catgaagaga ctaaagaaga ataatggaga ggtgggagga 240  
 aaagcaccgc ctcttgtagc tttagggctc cgcgaggact acgagagcac accttacaac 300  
 tttaatagaa ataagaagaa gaggcctatt actattgatg aaaatcaatt tgcaacatta 360  
 aatccaacgt atgcgacaga cattatcaag aagcagcaat tgccttctgt tagtgccgcg 420  
 tctgtgttga ggaagcaccg cgccaatgcc gacacccagt acagaaaaag attctctcat 480  
 ccaaattgtg caaaattctc tactgtcaat ttgaaggcta gagactatac tccactgtct 540  
 gtctctcggt cccatgtcaa ggggccaaaa cacttgaaat cttcttgtga taccgtgact 600  
 gaaacaaatg tagtaaaagag gaacttttct tccattgaca agtgggtcaa gctagaaaaa 660  
 ccccgctgtt actttgcagt ggcagaggct gataccaata ttgcagccgg tctagaatct 720  
 ccgttccatt tgattagaca ggccgcaaaa ttaggcctca tttctgacgt gcaagatgtg 780  
 tcgtccaact acgagaccat aaaacagagc tgtattgacg caaaggaaaa agcgtccaag 840  
 tttttgtggt ctaacaaccg tactaaacaa ccccttcat cttggtggcc tgttgggttt 900  
 ggtagtaaaa acctatccgt tttagacact agccctctct tgaactggaa caggttatgc 960  
 aagaataatg gtaaaagggt gataaaaacc atgagcatcg atcacatggc aaagaatggt 1020  
 ttttaagcttt cccctggagc atgtgaatct atattggaga agaaaaactac actcttgggg 1080  
 gaggtcactg cccaatgtaa gaaatgggaa agttaccgca gaaatattcc tgtaccagca 1140  
 cacgtccaac cagaatatgc ttctcaagtc gtaatgattg gaccatctga attatatctc 1200  
 gaagttaaaq tcgggtata ttacatgctt gaaactggaa aagttatcaa gtttatgacg 1260  
 gacaaggaaa tgtactgtga atttgtattt gaaactgttt ttagtcacgc tcttgaggga 1320  
 agaattgaaq gcgcagtagg tgtgagaaag atgtgtgttg aaggtttttg tgtcgagatg 1380  
 gattttgcag gcatttctgt gattgatgta ttaaatggag acctgaaatg taaaatggac 1440  
 gagaatgttg tacagcaacc taaccctcgc actacttctt ccaagccagc cgctgagctc 1500  
 atgcaagatc atggcagctt gtgtaggatg agggatactc tgtacggtgt taggatgctt 1560  
 caagctactg gccgcctgcc tgaagggtcta caatctaaat gcaagaaacc cattacggat 1620  
 tcaatttcag ccatagctat cgttggaaaa atgagggaga gaatgttaaa ccaattgccc 1680  
 tttgttttgg tagaaattgt aaatattgtc actcggttgt ctcaacaagg attagtgaat 1740  
 cgggacataa aaagtacaaa tatagtaatt gatggaataa ctgggtcaacc taagatgatt 1800  
 gatttttggt taattgtacc atgtaaaaag tactacaatt ttaaatgttg gggaaactgat 1860  
 gagaggttct ttagtaacca tctcatata gctcctgaat ttattaacag tgagttgtgt 1920  
 tcagaaactg ccatgacttt tgggttggtt tatttggtta tagacatgtt gtccattttg 1980  
 attaagagaa ctgcagattt gtctgccaat tctatctata caaacattcc atttttgtct 2040  
 attgtatcta aaatgtatga ccaggaaaa accaataagg cgagagcgta tgaaattgcg 2100  
 cctgtaattg gtgcattgtt cccgttcaag gataatattg ctaaaactttt ccagtcacct 2160  
 aaacattcat tgtatagcaa gaagggttaag tag 2193

<210> 275  
 <211> 724  
 <212> PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 275

Met	Glu	Gly	Gly	Asp	Gln	Arg	Thr	Lys	Leu	Thr	Pro	Ala	Thr	Val	Met
1				5					10					15	
Gly	Gln	Ser	Lys	Thr	Pro	Gly	Glu	Gly	Glu	Gly	Gly	Glu	Gly	Gly	Gly
			20					25					30		
Gln	Phe	Lys	Ile	Pro	Ser	Ala	Ile	Ala	Val	Lys	Ser	Cys	Cys	Ser	Lys
		35					40					45			
Asn	Ala	Thr	Arg	Arg	Ser	Pro	Pro	Ser	Asp	Ser	Pro	Tyr	Ser	Leu	Arg
	50					55					60				
Pro	Met	Lys	Arg	Leu	Lys	Asn	Asn	Gly	Glu	Val	Gly	Gly	Lys	Ala	
65					70				75					80	
Pro	Pro	Pro	Val	Thr	Leu	Arg	Leu	Arg	Glu	Asp	Tyr	Glu	Ser	Thr	Pro
				85					90					95	
Tyr	Asn	Phe	Asn	Arg	Asn	Lys	Lys	Lys	Arg	Pro	Ile	Thr	Ile	Asp	Glu
			100					105					110		
Asn	Gln	Phe	Ala	Thr	Leu	Asn	Pro	Thr	Tyr	Ala	Thr	Asp	Ile	Ile	Lys
		115					120					125			
Lys	Gln	Gln	Leu	Pro	Ser	Val	Ser	Ala	Ala	Ser	Val	Leu	Arg	Lys	His
		130				135					140				
Arg	Ala	Asn	Ala	Asp	Thr	Gln	Tyr	Arg	Lys	Arg	Phe	Ser	His	Pro	Asn
145					150					155				160	
Cys	Ala	Lys	Phe	Ser	Thr	Val	Asn	Leu	Lys	Ala	Arg	Asp	Tyr	Thr	Pro
				165					170					175	
Leu	Ser	Val	Leu	Arg	Ser	His	Val	Lys	Gly	Pro	Lys	His	Leu	Lys	Ser
			180					185					190		
Ser	Cys	Asp	Thr	Val	Thr	Glu	Thr	Asn	Val	Val	Lys	Arg	Asn	Phe	Ser
		195					200					205			
Ser	Ile	Asp	Lys	Trp	Val	Lys	Leu	Glu	Lys	Pro	Pro	Cys	Tyr	Phe	Ala
	210					215					220				
Val	Ala	Glu	Ala	Asp	Thr	Asn	Ile	Ala	Ala	Gly	Leu	Glu	Ser	Pro	Phe
225					230					235				240	
His	Leu	Ile	Arg	Gln	Ala	Ala	Lys	Leu	Gly	Leu	Ile	Ser	Asp	Val	Gln
				245					250					255	
Asp	Val	Ser	Ser	Asn	Tyr	Glu	Thr	Ile	Lys	Gln	Ser	Cys	Ile	Asp	Ala
			260					265					270		
Lys	Glu	Lys	Ala	Ser	Lys	Phe	Leu	Trp	Ser	Asn	Asn	Arg	Thr	Lys	Gln
		275					280					285			
Pro	Pro	Ser	Ser	Trp	Trp	Pro	Val	Gly	Phe	Gly	Ser	Lys	Asn	Leu	Ser
	290					295					300				
Val	Leu	Asp	Thr	Ser	Pro	Leu	Leu	Asn	Trp	Asn	Arg	Leu	Cys	Lys	Asn
305					310					315				320	
Asn	Gly	Lys	Gly	Trp	Ile	Lys	Thr	Met	Ser	Ile	Asp	His	Met	Ala	Lys
				325					330					335	
Asn	Val	Phe	Lys	Leu	Ser	Pro	Gly	Ala	Cys	Glu	Ser	Ile	Lys	Lys	Thr
			340					345					350		
Thr	Leu	Leu	Gly	Glu	Val	Thr	Ala	Gln	Cys	Lys	Lys	Trp	Glu	Ser	Tyr
		355					360					365			
Arg	Arg	Asn	Ile	Pro	Val	Pro	Ala	His	Val	Gln	Pro	Glu	Tyr	Ala	Ser
		370				375					380				
Gln	Val	Val	Met	Ile	Gly	Pro	Ser	Glu	Leu	Tyr	Leu	Glu	Val	Lys	Val
385					390					395				400	
Gly	Val	Tyr	Tyr	Met	Leu	Glu	Thr	Gly	Lys	Val	Ile	Lys	Phe	Met	Thr
				405					410					415	
Asp	Lys	Glu	Met	Tyr	Cys	Glu	Phe	Val	Phe	Glu	Thr	Val	Phe	Ser	His
			420					425					430		
Ala	Leu	Glu	Gly	Arg	Met	Lys	Gly	Ala	Val	Gly	Val	Arg	Lys	Met	Cys
		435					440					445			
Val	Glu	Gly	Phe	Cys	Val	Glu	Met	Asp	Phe	Ala	Gly	Ile	Ser	Val	Ile
	450					455					460				

Asp Val Leu Asn Gly Asp Leu Lys Cys Lys Met Asp Glu Asn Val Val  
 465 470 475 480  
 Gln Gln Pro Asn Pro Ser Thr Thr Ser Ser Lys Pro Ala Ala Glu Leu  
 485 490 495  
 Met Gln Asp His Gly Ser Leu Cys Arg Met Arg Asp Thr Leu Tyr Gly  
 500 505 510  
 Val Arg Met Leu Gln Ala Thr Gly Arg Leu Pro Glu Gly Leu Gln Ser  
 515 520 525  
 Lys Cys Lys Lys Pro Ile Thr Asp Ser Ile Ser Ala Ile Ala Ile Val  
 530 535 540  
 Gly Lys Met Arg Glu Arg Met Leu Asn Gln Leu Pro Phe Val Leu Val  
 545 550 555 560  
 Glu Ile Val Asn Ile Val Thr Arg Leu Ser Gln Gln Gly Leu Val Asn  
 565 570 575  
 Pro Asp Ile Lys Ser Asp Asn Ile Val Ile Asp Gly Ile Thr Gly Gln  
 580 585 590  
 Pro Lys Met Ile Asp Phe Gly Leu Ile Val Pro Cys Lys Lys Tyr Tyr  
 595 600 605  
 Asn Phe Lys Cys Trp Gly Thr Asp Glu Arg Phe Phe Ser Asn His Pro  
 610 615 620  
 His Thr Ala Pro Glu Phe Ile Asn Ser Glu Leu Cys Ser Glu Thr Ala  
 625 630 635 640  
 Met Thr Phe Gly Leu Ala Tyr Leu Leu Ile Asp Met Leu Ser Ile Leu  
 645 650 655  
 Ile Lys Arg Thr Ala Asp Leu Ser Ala Asn Ser Ile Tyr Thr Asn Ile  
 660 665 670  
 Pro Phe Leu Ser Ile Val Ser Lys Met Tyr Asp Gln Glu Lys Thr Asn  
 675 680 685  
 Arg Pro Arg Ala Tyr Glu Ile Ala Pro Val Ile Gly Ala Cys Phe Pro  
 690 695 700  
 Phe Lys Asp Asn Ile Ala Lys Leu Phe Gln Ser Pro Lys His Ser Lys  
 705 710 715 720  
 Lys Lys Val Lys

<210> 276  
 <211> 615  
 <212> DNA  
 <213> SHRIMP

<400> 276  
 atgtctagcg gaaaagtaac ctacgaaatc gttgaagggg gattgttgaa caacaagtac 60  
 cttctagatg gaggtgcagc aatctgtctg cagtctaatt gtgttgcaag aaaacgtcac 120  
 gccggttccc tccacgataa cctcttcaag atgctaggat ttggcgaccc ctataaacag 180  
 agacggggaa aaacaaacag caaaaatctg gccataattg aagatagacc tcaactcggg 240  
 tcagtatcag ttgtccaaca cccgacagaa ccagaaagggt tttgctccat gacattctta 300  
 tttgctcagt acaatatggg taatggaaga aaatgttact tccctaacga caaagagtat 360  
 gttgagagct gcaagaagca cgaaagggtc cacaaatctt ccacagaaat gaaaagattg 420  
 cgcttgattt actttaacaa gtgtcttcac gcgatcgcca aatcacctgc aatgaagaag 480  
 tacaacaaga taatcttccc tgccagaatt ggggtgcgcg cagctggagg agattgggag 540  
 aagtaccatg cttctattcg agatttctcc acaatcattg ataaggaagt gataatagtg 600  
 tctcaaagga tgtaa 615

<210> 277  
 <211> 204  
 <212> PRT  
 <213> SHRIMP

<400> 277  
 Met Ser Ser Gly Lys Val Thr Tyr Glu Ile Val Glu Gly Gly Leu Leu

1	5	10	15
Asn Asn Lys Tyr Leu Leu Asp Gly Gly Ala Ala Ile Cys Leu Gln Ser			
20	25	30	
Asn Cys Val Ala Arg Lys Arg His Ala Gly Ser Leu His Asp Asn Leu			
35	40	45	
Phe Lys Met Leu Gly Phe Gly Asp Pro Tyr Lys Gln Arg Arg Gly Lys			
50	55	60	
Thr Asn Ser Lys Asn Leu Ala Ile Ile Glu Asp Arg Pro Gln Leu Gly			
65	70	75	80
Ser Val Ser Val Val Gln His Pro Thr Glu Pro Glu Arg Phe Cys Ser			
85	90	95	
Met Thr Phe Leu Phe Ala Gln Tyr Asn Met Gly Asn Gly Arg Lys Cys			
100	105	110	
Tyr Phe Pro Asn Asp Lys Glu Tyr Val Glu Ser Cys Lys Lys His Glu			
115	120	125	
Arg Val His Lys Ser Ser Thr Glu Met Lys Arg Leu Arg Leu Tyr Tyr			
130	135	140	
Phe Asn Lys Cys Leu His Ala Ile Ala Lys Ser Pro Ala Met Lys Lys			
145	150	155	160
Tyr Asn Lys Ile Ile Phe Pro Ala Arg Ile Gly Cys Ala Ala Ala Gly			
165	170	175	
Gly Asp Trp Glu Lys Tyr His Ala Ser Ile Arg Asp Phe Ser Thr Ile			
180	185	190	
Ile Asp Lys Glu Val Ile Ile Val Ser Gln Arg Met			
195	200		

<210> 278  
 <211> 828  
 <212> DNA  
 <213> SHRIMP

<400> 278  
 atgtcttcca accgattcag tcagctgagg ggcaacgagg agatggttgg ggactattca 60  
 agatggacaa ctgtcaagaa caggaggaac agacagcaac agtattccca tagtttccgt 120  
 cccaacaac aacaacaaca tcaaaaaaga acatcaacca attctcctcc tgctccacct 180  
 cctccattcc ccatcattag ttggggagcc ctggcagct actcaatgta tcgactggat 240  
 gaccagtgcg gaaattgcga tgaaactggc tattacaatt tccactctta tgatagaaag 300  
 agggaaagag ttgcgtcatt aaacaacact ccaagtgaag gcatgtggcg gcgcacaagt 360  
 agatcttccc ccttccttaa taagaagaag gacgttgacg aagctccacc tcctcaatca 420  
 aaccaacaca tgtacccct caacaagtac agtttccgtg aatatactcc ttcattcaaag 480  
 cttgtgaatt ggcgagaccc ttcacaagaa aaacaggaca agatcttaca agaggaagaa 540  
 gctcgcgccc ctacacccac tccccaagaa aaggaaccag aagtagaaac taaagatgat 600  
 gttgtcatcg aggaagaaac tgcaccagaa ccagaaccag aaccagcccc agttccagac 660  
 ccagatattc ccgcaataac tgcaactact actactacta cagttgcaac acgtcacgac 720  
 gattcttcta cagtatttct cagaaatgtt attctgagta tcgtgttttg gtttctgggt 780  
 gtttattctg cattatttgc aaaatgtatt agatctaaga aggaataa 828

<210> 279  
 <211> 275  
 <212> PRT  
 <213> SHRIMP

<400> 279  
 Met Ser Ser Asn Arg Phe Ser Gln Leu Arg Gly Asn Glu Glu Met Val  
 1 5 10 15  
 Gly Asp Tyr Ser Arg Trp Thr Thr Val Lys Asn Arg Arg Asn Arg Gln  
 20 25 30  
 Gln Gln Tyr Ser His Ser Phe Arg Pro Gln Gln Gln Gln His Gln  
 35 40 45  
 Lys Arg Thr Ser Thr Asn Ser Pro Pro Ala Pro Pro Pro Phe Pro



50		55		60
Ile Ile Ser Trp Gly Ala Leu Gly Ser Tyr Ser Met Tyr Arg Leu Asp				
65		70		75
Asp Gln Cys Arg Asn Cys Asp Glu Thr Gly Tyr Tyr Asn Phe His Ser				
	85		90	
Tyr Asp Arg Lys Arg Glu Arg Val Arg Ser Leu Asn Asn Thr Pro Ser				
	100		105	
Glu Gly Met Trp Arg Arg Thr Ser Arg Ser Ser Pro Phe Leu Asn Lys				
	115		120	
Lys Lys Asp Val Asp Glu Ala Pro Pro Pro Gln Ser Asn Gln His Met				
	130		135	
Tyr Pro Leu Asn Lys Tyr Ser Phe Arg Glu Tyr Thr Pro Ser Ser Lys				
	145		150	
Leu Val Asn Trp Arg Asp Pro Ser Gln Glu Lys Gln Asp Lys Ile Leu				
	165		170	
Gln Glu Glu Glu Ala Arg Ala Pro Thr Pro Thr Pro Gln Glu Lys Glu				
	180		185	
Pro Glu Val Glu Thr Lys Asp Asp Val Val Ile Glu Glu Glu Thr Ala				
	195		200	
Pro Glu Pro Glu Pro Glu Pro Ala Pro Val Pro Asp Pro Asp Ile Pro				
	210		215	
Ala Ile Thr Ala Thr Thr Thr Thr Thr Thr Val Ala Thr Arg His Asp				
	225		230	
Asp Ser Ser Thr Val Phe Leu Arg Asn Val Ile Leu Ser Ile Val Phe				
	245		250	
Trp Phe Leu Gly Val Tyr Ser Ala Leu Phe Ala Lys Cys Ile Arg Ser				
	260		265	
Lys Lys Glu				
	275			

<210> 280  
 <211> 2025  
 <212> DNA  
 <213> SHRIMP

<400> 280  
 atggcaggga atagaaccca gttcgtatcg tccctgattg ctaaattgtat atcagacgtg 60  
 gaacaaggca tggagtgttg tggcagacaa gcacaggatg cattaatgac tcgcctagcc 120  
 aacttaaaat tgggcgattc tcttaaagaa actgatgtta atttgggaata cttgagatac 180  
 gcgtctacgc ccctccttgg ggaattaaac tacgacaaac aacaatatgc ggcaacagtt 240  
 gacatcaacc taatggctca tttctcctac gctgcttttg gtatagaaaag tatactgaat 300  
 tctatacggg gagttgtagt ggctaatacat caacgtagaa ataattggaaa aaaaccttct 360  
 gaaccaatct cacgccctca cccgctggga ggggtagaac ctctctatc gtcagagttg 420  
 gcaaatgcaa taagggacaa gttcatcagc atgggggcgt tggacagatt gaattcagca 480  
 atagtacag cggccttggg ggctattgcc agtgaacgtg aactattctt acgtgaaaat 540  
 gctgtaaact acatgtacga tgtagaattt gcagaaagag atgctgtctac tacagataca 600  
 gggaatgtag tctatctttc caccaaaatg gacgaagatg aagatgacat aataaagcgt 660  
 tcagaaaat tagataaggt atcaaaaacga cccgcaaagg aaggtataga ctggcgcccc 720  
 acccctgaca attcgttccc ttaccaattg atttggggcg atgattctgt agatgatact 780  
 gttcttatag atctcatcac caatgcgac gtgcctaata tttttatggc aaaatttattc 840  
 ctgttcatat gtaaccattt aagggcagtt attaggagta tgagggaaat tttatacggg 900  
 aacatttctt cttcatccga taattatttt gaggatggac gtaaatggtg cttctggttg 960  
 aacctgtaca atagactgga atggttcatg ttagtagtta gatttgtaat tttcctccac 1020  
 tcaaaaaagg agtccttttc aggagctgac aatgttaacg tgaagagact tctggtggtg 1080  
 gttgtggaga gtttctctcc cgttctcttg gacactgaat gggtaagac taatataacg 1140  
 tcatggcctg ttattaataa cagcaataat aatagtacac tccctgtgac agaagacacc 1200  
 ttaatgagac tagcgataag gacgagtagc ggtgcccgac atcctatttt cgacgaaatt 1260  
 aactccttga caacagcagt gaccaaccgt attaccttcc agtctgcaga attctgcaca 1320  
 aagattttgc tcgggcgagc tctggacgaa gaagaagctg gaacaaaaat gctagtaaaa 1380  
 tcagtcaaaag agacgggaga agaaaaggat aagaacaata cgttctcttc atttgggtta 1440

```

ttactgaaga acacaaaaaa tgaagaattg gaaataaaca taggcgataa cgatgatgag 1500
actacagatg tggcttggtg ggcacgtact tctcgcacat cctttatccg taataggaca 1560
tatgcgttta aaaaaatatg gggccttgag gatgcaagtg atgtagtcga gctgaagcga 1620
gagagtgcgc ccattacatc cttgttcacc gataagagca gtcctctcct atttccgtat 1680
gtgtccgact ggagttgctt actattacat ccctgttgta aagcaccggc cataattaaa 1740
agtgtgtggt tacaaatcct gaaagatttt tcccaggaaa atataaaaaac tataaatgaa 1800
aaggtacaat ctctttcatc tgagatttgt cagaaatcaa acgaccgttt taaaaataaa 1860
aaaattgctg ccgaacacgt tgcagtgta aaaaagttat taaatacgat aagcaacagg 1920
gagcaagaag cagcactatc tacagaacac tgtatttggt taacgatttt gtggaaacaa 1980
gtcgttcaga acactctcaa ctttctggag aattttcccg tataa 2025

```

&lt;210&gt; 281

&lt;211&gt; 672

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 281

```

Met Ala Gly Asn Arg Thr Gln Phe Val Ser Ser Leu Ile Ala Lys Cys
1      5      10      15
Ile Ser Asp Val Glu Gln Gly Met Glu Cys Cys Gly Arg Gln Ala Gln
20     25     30
Asp Ala Leu Met Thr Arg Leu Ala Asn Leu Lys Leu Gly Asp Ser Leu
35     40     45
Lys Glu Thr Asp Val Asn Leu Glu Tyr Leu Arg Tyr Ala Ser Thr Pro
50     55     60
Leu Leu Gly Glu Leu Asn Tyr Asp Lys Gln Gln Tyr Ala Ala Thr Val
65     70     75     80
Asp Ile Asn Leu Met Ala His Phe Ser Tyr Ala Ala Leu Gly Ile Glu
85     90     95
Ser Ile Leu Asn Ser Ile Arg Arg Val Val Val Ala Asn His Gln Arg
100    105    110
Arg Asn Asn Gly Lys Lys Pro Ser Glu Pro Ile Ser Arg Pro His Pro
115    120    125
Leu Gly Gly Val Glu Pro Pro Leu Ser Ser Glu Leu Ala Asn Ala Ile
130    135    140
Arg Asp Lys Phe Ile Ser Met Gly Ala Leu Asp Arg Leu Asn Ser Ala
145    150    155    160
Ile Val Thr Ala Ala Leu Gly Ala Ile Ala Ser Glu Leu Phe Leu Arg
165    170    175
Glu Asn Ala Val Asn Tyr Met Tyr Asp Val Glu Phe Ala Glu Arg Asp
180    185    190
Ala Ala Thr Thr Asp Thr Gly Asn Val Val Tyr Leu Ser Thr Lys Met
195    200    205
Asp Glu Asp Glu Asp Asp Ile Ile Lys Arg Ser Glu Ile Leu Asp Lys
210    215    220
Val Ser Lys Arg Pro Ala Lys Glu Gly Ile Asp Trp Arg Pro Thr Pro
225    230    235    240
Asp Asn Ser Phe Pro Tyr Gln Leu Ile Trp Gly Asp Asp Ser Val Asp
245    250    255
Asp Thr Val Leu Ile Asp Leu Ile Thr Asn Ala Ile Val Pro Asn Ile
260    265    270
Phe Met Ala Lys Phe Ile Leu Phe Ile Cys Asn His Leu Arg Ala Val
275    280    285
Ile Arg Ser Met Arg Glu Ile Leu Tyr Gly Asn Ile Ser Ser Ser Ser
290    295    300
Asp Asn Tyr Phe Glu Asp Gly Arg Lys Trp Cys Phe Trp Leu Asn Leu
305    310    315    320
Tyr Asn Arg Leu Glu Trp Phe Met Leu Val Val Arg Phe Val Ile Phe
325    330    335
Leu His Ser Lys Lys Glu Ser Phe Ser Gly Ala Asp Asn Val Asn Val
340    345    350

```

Lys Arg Leu Leu Val Val Val Val Glu Ser Phe Pro Pro Val Leu Leu  
 355 360 365  
 Asp Thr Glu Trp Val Lys Thr Asn Ile Thr Ser Trp Pro Val Ile Asn  
 370 375 380  
 Asn Ser Asn Asn Asn Ser Thr Leu Pro Val Thr Glu Asp Thr Leu Met  
 385 390 395 400  
 Arg Leu Ala Ile Arg Thr Ser Ser Gly Ala Arg His Pro Ile Phe Asp  
 405 410 415  
 Glu Ile Asn Ser Leu Thr Thr Ala Val Thr Asn Arg Ile Thr Phe Gln  
 420 425 430  
 Ser Ala Glu Phe Cys Thr Lys Ile Leu Leu Gly Arg Ala Leu Asp Glu  
 435 440 445  
 Glu Glu Ala Gly Thr Lys Met Leu Val Lys Ser Val Lys Glu Thr Gly  
 450 455 460  
 Glu Glu Lys Asp Lys Asn Asn Thr Phe Ser Ser Phe Gly Leu Leu Leu  
 465 470 475 480  
 Lys Asn Thr Lys Asn Glu Glu Leu Glu Ile Asn Ile Gly Asp Asn Asp  
 485 490 495  
 Asp Glu Thr Thr Asp Val Ala Cys Trp Ala Arg Thr Ser Ser Thr Ser  
 500 505 510  
 Phe Ile Arg Asn Arg Thr Tyr Ala Phe Lys Lys Ile Trp Gly Leu Glu  
 515 520 525  
 Asp Ala Ser Asp Val Val Glu Leu Lys Arg Glu Ser Asp Ala Ile Thr  
 530 535 540  
 Ser Phe Val Thr Asp Lys Ser Ser Pro Leu Leu Phe Pro Tyr Val Ser  
 545 550 555 560  
 Asp Trp Ser Cys Leu Leu Leu His Pro Cys Cys Lys Ala Pro Ala Ile  
 565 570 575  
 Ile Lys Ser Val Trp Leu Gln Ile Leu Lys Asp Phe Ser Gln Glu Asn  
 580 585 590  
 Ile Lys Thr Ile Asn Glu Lys Val Gln Ser Leu Ser Ser Glu Ile Cys  
 595 600 605  
 Gln Lys Ser Asn Asp Arg Phe Lys Asn Lys Lys Ile Ala Ala Glu His  
 610 615 620  
 Val Arg Ser Val Lys Lys Leu Leu Asn Thr Ile Ser Asn Arg Glu Gln  
 625 630 635 640  
 Glu Ala Ala Leu Ser Thr Glu His Cys Ile Trp Leu Thr Ile Leu Trp  
 645 650 655  
 Lys Gln Val Val Gln Asn Thr Leu Asn Leu Leu Glu Asn Phe Pro Val  
 660 665 670

&lt;210&gt; 282

&lt;211&gt; 2535

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 282

atgttcactc acttgaccgc agccttccgc aagatgaaca acctagtcaa tcgcagcttc 60  
 attgacgttc accgagtggt ggccgagtta tcctatccag aattcgaaga ggatgtaaag 120  
 aatccggaat catccatata tagaactccg atatccctct tccaaaacaa ggatattgtt 180  
 acaatagttg gtgattacat cctctctccg aagacggact cattccaagt tctataccca 240  
 atcaagaagg tcatacgaaca cttcccagta atcttccact gcacccacaa taatgccct 300  
 ctctgggtac accttctgga cgaacgccat catgcgctgc tccagagcct gctgacgtac 360  
 gagattgtga atgccaagta caggggtatt gttgtcatcc catactacag gcgccccatc 420  
 aactatcaaa ctgggaagag tctactgatg agcaaactgg cgtccgtaaa agttctggac 480  
 attttaatga gatgtggatc atacaaattc atctcattaa tgtgcatgat caacaagaag 540  
 aacaacacca actttcttca ctgctgtgca agtaaattggg gagaagttgg aagcaagatg 600  
 atgctccaca ttgctgaaat gttctttgcc aaccctacta ctagccaaca cctatccgac 660  
 gctagtagtt tccctgatgc tgcagcagag gacgacaagg ggaaaacacc tgcccatcta 720  
 gcaatccaag aagataatgc tgatgcactc ctgttctctga tctccctcta cggcgcaccc 780

```

tggtttcaag ataacaactc gtacatgaaa tctgcccttg aactcaagtc taacaagtgt 840
gtcaagggtac tatcctttgc agctgacaag tacgagattt tacccaacat taacaacaat 900
caactagaac cagataccat gtgtggagtg tgtgcaacat ctgtggaaga agatgaaaaat 960
gaagggaaaa caacaagtct ttcttggtac cagatgaatt gcaagcatta catccattgc 1020
gaatgcctga tgggaatgtg tgctgctgct ggcaatgtac aatgccccat gtgccgtgag 1080
gatgtgggag acgaagtact ggaaagatgc cctcctacaa tathtagatg gttaaaactg 1140
gctgagagat ctgaacacaa tcgtgtactt ttgaagcaa aaaagcaaga attctataag 1200
cagatggaag caatgaaacc tcccagagtt gttgttcctc ctgcgaggac atttctcacc 1260
ccagccagaa gaggcgaacg agccatcaga atcgcaagag aaattgccac caacgccatc 1320
gctgaagcca cagctcaagg agatgtcaac tctacttcc ctgttctcat tgacgggagc 1380
ggagaagaat atgaagaaga gggagaagaa ttcttcaatt ctgaagagga ggcgcttgct 1440
tttggaagac catttctgga agatgaggaa gaagccagac aaatacagat gcgccagttt 1500
gctgaactgt ctagacgagg cgtttctgtc aatattatta acaatgataa tcctcatcga 1560
cacatctcta cagtaaatat tgtgcaacca gtttatggag ttgaaaagtc acctgctgct 1620
tccttcatct acaacatgct caagaatgac gtctttgagt ctatacgctc aagagatact 1680
cgagttggag gagaaagagt gcccgtcatg aacctgtcca atgacaagag ggcattattc 1740
cacgcagctt cttccatgct ttgtgacttt gccacagaaa caaactctca aattgttgga 1800
ttggactttc aagcagtgtg tgatccccat cacatatcca actatatcga gacgtttggt 1860
agtcctcttc acgctacccc aggagccgtc acttttctgg acggggccca ggactattat 1920
gcagagagta tcagatacga caatgatatt gtctcattct cagaaatggc aagtgagttg 1980
cacatcaccc aagcattaga tgtctttgag ggtagtttat tatccccact gttcaagaaa 2040
atcaggactg gaaaatctta ctctaactgg aacgaccatt tgaggcgtag aaattatgct 2100
cgagatattg ctgaggaatt tgttagggta tgtgaaaact ctctagcttc acgcgaacac 2160
ccccctgttc atgtacatcc ctttagagat ggagcaatcc ccattctcat tgaatatata 2220
gtagatttca tccaccactg catcacctgg tctatgcaag ttaatgcact ccattgtatg 2280
agaaagtaca ttgaacacga gaatacaaat gtgcacctgt taaacttgcg tcctactgat 2340
gaaaggggtg aagttttaag ggtatctcaa ctcagatgga gccgcttggt caatgaacaa 2400
tacaacacta gaatgtccct cagcaccaaa agattgagcc tcatgaagat cttcaaccat 2460
gatttgggtg tgtctaaatt tgggtgtatac aaactcctag atattattga aatgtactgt 2520
tttactttaa tctaa 2535

```

&lt;210&gt; 283

&lt;211&gt; 838

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 283

```

Met Phe Thr His Leu Thr Arg Ala Phe Arg Lys Met Asn Asn Leu Val
 1          5          10          15
Asn Arg Ser Phe Ile Asp Val His Arg Val Val Ala Glu Leu Ser Tyr
          20          25          30
Pro Glu Phe Glu Glu Asp Val Lys Asn Pro Glu Ser Ser Ile Tyr Arg
          35          40          45
Thr Pro Ile Ser Leu Phe Gln Asn Lys Asp Ile Val Thr Ile Val Gly
          50          55          60
Asp Tyr Ile Leu Ser Pro Lys Thr Asp Ser Phe Gln Val Leu Tyr Pro
          65          70          75          80
Ile Lys Lys Val Ile Glu His Phe Pro Val Ile Phe His Cys Thr His
          85          90          95
Asn Asn Ala Pro Leu Trp Val His Leu Leu Asp Glu Arg His His Arg
          100          105          110
Leu Leu Gln Ser Leu Leu Thr Tyr Glu Ile Val Asn Ala Lys Tyr Arg
          115          120          125
Gly Ile Val Val Ile Pro Tyr Tyr Arg Arg Pro Ile Asn Tyr Gln Thr
          130          135          140
Gly Lys Ser Leu Leu Met Ser Lys Leu Ala Ser Val Lys Val Leu Asp
          145          150          155          160
Ile Leu Met Arg Cys Gly Ser Tyr Lys Phe Ile Ser Leu Met Cys Met
          165          170          175
Ile Asn Lys Lys Asn Asn Thr Asn Phe Leu His Cys Cys Ala Ser Lys
          180          185          190

```

Trp	Gly	Glu	Val	Gly	Ser	Lys	Met	Met	Leu	His	Ile	Ala	Glu	Met	Phe
		195					200					205			
Phe	Ala	Asn	Pro	Thr	Thr	Ser	Gln	His	Leu	Ser	Asp	Ala	Ser	Ser	Phe
	210					215					220				
Pro	Asp	Ala	Ala	Ala	Glu	Asp	Asp	Lys	Gly	Lys	Thr	Pro	Ala	His	Leu
225					230					235					240
Ala	Ile	Gln	Glu	Asp	Asn	Ala	Asp	Ala	Leu	Leu	Phe	Leu	Ile	Ser	Leu
				245					250					255	
Tyr	Gly	Ala	Pro	Trp	Phe	Gln	Asp	Asn	Asn	Ser	Tyr	Met	Lys	Ser	Ala
			260				265						270		
Leu	Glu	Leu	Lys	Ser	Asn	Lys	Cys	Val	Lys	Val	Leu	Ser	Phe	Ala	Ala
	275						280					285			
Asp	Lys	Tyr	Glu	Ile	Leu	Pro	Asn	Ile	Asn	Asn	Asn	Gln	Leu	Glu	Pro
	290					295					300				
Asp	Thr	Met	Cys	Gly	Val	Cys	Ala	Thr	Ser	Val	Glu	Glu	Asp	Glu	Asn
305					310						315				320
Glu	Gly	Lys	Thr	Thr	Ser	Leu	Ser	Trp	Tyr	Gln	Met	Asn	Cys	Lys	His
				325					330					335	
Tyr	Ile	His	Cys	Glu	Cys	Leu	Met	Gly	Met	Cys	Ala	Ala	Ala	Gly	Asn
			340					345					350		
Val	Gln	Cys	Pro	Met	Cys	Arg	Glu	Asp	Val	Gly	Asp	Glu	Val	Leu	Glu
		355					360					365			
Arg	Cys	Pro	Pro	Thr	Ile	Phe	Arg	Trp	Leu	Lys	Leu	Ala	Glu	Arg	Ser
	370					375					380				
Glu	His	Asn	Arg	Val	Leu	Phe	Glu	Ala	Lys	Lys	Gln	Glu	Phe	Tyr	Lys
385					390					395					400
Gln	Met	Glu	Ala	Met	Lys	Pro	Pro	Arg	Val	Val	Val	Pro	Pro	Arg	Arg
				405					410					415	
Thr	Phe	Leu	Thr	Pro	Ala	Arg	Arg	Gly	Glu	Arg	Ala	Ile	Arg	Ile	Ala
			420					425					430		
Arg	Glu	Ile	Ala	Thr	Asn	Ala	Ile	Ala	Glu	Ala	Thr	Ala	Gln	Gly	Asp
		435					440					445			
Val	Asn	Ser	Tyr	Phe	Pro	Val	Leu	Ile	Asp	Gly	Ser	Gly	Glu	Glu	Tyr
	450					455					460				
Glu	Glu	Glu	Gly	Glu	Glu	Phe	Phe	Asn	Ser	Glu	Glu	Glu	Ala	Phe	Gly
465					470					475					480
Arg	Pro	Phe	Leu	Glu	Asp	Glu	Glu	Glu	Ala	Arg	Gln	Ile	Gln	Met	Arg
				485					490					495	
Gln	Phe	Ala	Glu	Leu	Ser	Arg	Arg	Gly	Val	Ser	Val	Asn	Ile	Ile	Asn
			500					505					510		
Asn	Asp	Asn	Pro	His	Arg	His	Thr	Val	Asn	Ile	Val	Gln	Pro	Val	Tyr
	515						520					525			
Gly	Val	Glu	Lys	Ser	Pro	Ala	Ala	Ser	Phe	Ile	Tyr	Asn	Met	Leu	Lys
	530					535					540				
Asn	Asp	Val	Phe	Glu	Ser	Ile	Arg	Ser	Arg	Asp	Thr	Arg	Val	Gly	Gly
545					550					555					560
Glu	Arg	Val	Pro	Val	Met	Asn	Leu	Ser	Asn	Asp	Lys	Arg	Ala	Leu	Phe
				565					570					575	
His	Ala	Ala	Ser	Ser	Met	Leu	Cys	Asp	Phe	Ala	Thr	Glu	Thr	Asn	Ser
			580					585					590		
Gln	Ile	Val	Gly	Leu	Asp	Phe	Gln	Ala	Val	Tyr	Asp	Pro	His	His	Asn
		595					600					605			
Tyr	Ile	Glu	Thr	Phe	Gly	Ser	Pro	Leu	His	Ala	Tyr	Pro	Gly	Ala	Val
	610					615					620				
Thr	Phe	Leu	Asp	Gly	Ala	Gln	Asp	Tyr	Tyr	Ala	Glu	Ser	Ile	Arg	Tyr
625					630					635					640
Asp	Asn	Asp	Ile	Val	Ser	Phe	Ser	Glu	Met	Ala	Ser	Glu	Leu	His	Ile
				645					650					655	
Thr	Glu	Ala	Leu	Asp	Val	Phe	Glu	Gly	Ser	Leu	Leu	Ser	Pro	Leu	Phe
			660					665					670		
Lys	Lys	Ile	Arg	Thr	Gly	Lys	Ser	Tyr	Ser	Asn	Trp	Asn	Asp	His	Leu

675	680	685
Arg Arg Arg Asn Tyr Ala Arg Asp Ile Ala Glu Glu Phe Val Arg Val		
690	695	700
Cys Glu Asn Ser Leu Ala Ser Arg Glu His Pro Pro Val His Val His		
705	710	715
Pro Phe Arg Asp Gly Ala Ile Pro Ile Leu Ile Glu Tyr Ile Val Asp		
725	730	735
Phe Ile His His Cys Ile Thr Trp Ser Met Gln Val Asn Ala Leu His		
740	745	750
Cys Met Arg Lys Tyr Ile Glu His Glu Asn Thr Asn Val His Leu Leu		
755	760	765
Asn Leu Arg Pro Thr Asp Glu Arg Val Glu Val Leu Arg Val Ser Gln		
770	775	780
Leu Arg Trp Ser Arg Leu Phe Asn Glu Gln Tyr Asn Thr Arg Met Ser		
785	790	795
Leu Ser Thr Lys Arg Leu Ser Leu Met Lys Ile Phe Asn His Asp Leu		
805	810	815
Gly Val Ser Lys Phe Gly Val Tyr Lys Leu Leu Asp Ile Ile Glu Met		
820	825	830
Tyr Cys Phe Thr Leu Ile		
835		

&lt;210&gt; 284

&lt;211&gt; 2799

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 284

```

atggcagcag acctcctaga gttggctatc caggaaacaa tccagtctga attggaagaa 60
attgccgata ctgaattcct caattatctt ccccataaaa ctggcatctg cgaagaagct 120
gcagctaattg gacggccata tcttcctaca ctagaaatga ggaacgaagt tgaccatttc 180
tggtcccaag ataacaggaa gctgaaactc ttggggcatt tttgtggcaa cttgtatgtg 240
gaggcattta tagctggttc tatagatgct gaaacgtgctg tgggcttttt gaggtcgcaa 300
gcaactggac taggataccc tctattgaaa aaactagccc tgattgcccg tgaggataaa 360
tcaaatacaa ctaattacaa cttgtacatt gatagaaatt caatgatgaa acaagttttt 420
agtgcgtgaaa ttgataagcg tccttcacac atacagaaca cttctcacac aaaatcttcc 480
cccggtgtact tgaactgat cgacagaaga accgagtgtc ttgccctgga ttggctggac 540
gcatccaaga ggacggccaa ggaaattgga gcagccagaa aggtttgttt cctccagaac 600
ctgattgttg ccatattaat acctgcatac acagaaacgt ttgttcttga tacaggcaac 660
gaactagaac agcaagtatt ggatgatgca tattttaatg cggagaataa agataaagtg 720
gatgaaatgt gtgtagtggc catattgagt actttgcaca atttatattgt taggaaaagt 780
cttccccatc atttgtacaa tgcaccttct cgtcttcttc cctttggaca acaccctatc 840
atcaacattg aaaaatcctc attctttaat gaagatacga cacctattct agcgtcaatt 900
tctataccat caagtatggt aataaaacac catacgcgaa aaaatagtag atggagatgt 960
cccaataact tgatgactgc agcagaacgg tctatatattt tacgtggagt tttaacagtc 1020
agtggagatt acggatgggt ttctgtaatt gtaggatcta ctataatgcc tagtgtactt 1080
ttctatggcg accgaaaaca tctaataaat acagtcaaat ctaataactt ttctgccata 1140
acctgttctt attggaacaa gtatatggat tgcagatctt atgggtttga gattatagac 1200
acacctgaaa ataactgtgg ttttcgtata agggctgcaa ttgattgctc gaacacagat 1260
ttccattcac cggtaacgcg agtcaacaag aagaaaacga gcattattaa tgcggtaaaag 1320
aacccttttt ttattagaca cacagaacct aagtggatca acaaaaatgc catgtgtggt 1380
gaagtattgg aaaatgttgg cgtgaccctc gaacaacacg tccgtgttag tgatgagtat 1440
atggacagat ttggtagtct attacttgga cgagaaaaga aatggacgtg taattatcta 1500
gtagaataa agtctctaga aactatttct aacaatctca agggtaaaat tgacaccatg 1560
tgtaaaattc tagaaaccaa gtataactac aaacttctt ccttatacta taagcaataa 1620
actgctacgt ctgatgatcc tataaagatg aagattatcg cctctataaa caagaggagg 1680
tatttggtga atattctaga atttgctata atttcatcag agaaaaagga tgagggtggag 1740
gaagatcaca ctaaaaccgg caatggtggt tgtgcgtttt caaagtataa gaaaaaacia 1800
ctcgaaccta aacaacattt aattgttaaa gtgaataaat acattgaggc tttttcgtta 1860
attaagatgc tgagaaatga ttgcgaacgc aacaagtgtg ggtttaaaga ggctgaaatt 1920

```

```

agagagtgcg ccaacgaact ggtacgagaa ctgtataggg cttcggccag aagttatgtc 1980
cacgatctgg tattgaagcg aactaatgtc cacttgacat ggcaacgccc ttacgatgaa 2040
aacgctaaca ctatcatgtc tttaatacct aaatgtaagc tacacacagt attgtacgat 2100
aaagattcgc gcgatgttaa gttgttgaat tttctgagaa cgagggatgg aaattataac 2160
ccaataagac actctatgct ggagttagta tacggagagg agtacgctaa agatgtcagt 2220
actgttacct gttttgaatg gttaaaatgg tgctcgaaaa aaggtgtgat taaatatgaa 2280
gactttttgg atcgttacga gaaaacgggg gaggaagata aagacgaaag ggaattcttt 2340
agactaaaaa aatgtagtag agatcacact aaggatataa aaaaaataga aaatgtacta 2400
aattctgata cactttattc ttattctctc gataaaaatg tgcaaaccce cgcattcttc 2460
agtacagttg taaaaaatga cactgacgga aaaacgtcta tgggtgggctg ggattatatt 2520
ttttcaatcg gtaaaggaga aaaaacaacc aaaaaacgaa aactggaaac gatagatata 2580
tcgagtagtg acgacgacga tgaagaagaa gaggaagaag atgaaggaaa aagaatgaaa 2640
atgaataact gcagcagcag catcaagaac aagagcaaga acaagaatgg gagaatgtgt 2700
tgcacagata ttctcaatgt tgtagaacct tctctaccta atactttatc gttcaattgt 2760
gtaaaaagta tggatgtgtt gaatttgtaa tgatgttaa 2799

```

&lt;210&gt; 285

&lt;211&gt; 924

&lt;212&gt; PRT

&lt;213&gt; SHRIMP

&lt;400&gt; 285

```

Met Ala Ala Asp Leu Leu Glu Leu Ala Ile Gln Glu Thr Ile Gln Ser
  1           5           10           15
Glu Leu Glu Glu Ile Ala Asp Thr Glu Phe Leu Asn Tyr Leu Pro His
          20           25           30
Lys Thr Gly Ile Cys Glu Glu Ala Ala Ala Asn Gly Arg Pro Tyr Leu
          35           40           45
Pro Thr Leu Glu Met Arg Asn Glu Val Asp His Phe Trp Ser Gln Asp
          50           55           60
Asn Arg Lys Leu Lys Leu Leu Gly His Phe Cys Gly Asn Leu Tyr Val
          65           70           75           80
Glu Ala Phe Ile Ala Gly Ser Ile Asp Ala Glu Thr Cys Val Gly Phe
          85           90           95
Leu Arg Ser Gln Ala Thr Gly Leu Gly Tyr Pro Leu Leu Lys Lys Leu
          100          105          110
Ala Leu Ile Ala Arg Glu Asp Lys Ser Asn Thr Thr Asn Tyr Asn Leu
          115          120          125
Tyr Ile Asp Arg Asn Ser Met Met Lys Gln Val Phe Ser Ala Glu Ile
          130          135          140
Asp Lys Arg Pro Ser Ser Ile Gln Asn Thr Ser His Thr Lys Ser Ser
          145          150          155          160
Pro Val Tyr Leu Lys Leu Ile Asp Arg Arg Thr Glu Cys Leu Ala Leu
          165          170          175          180
Asp Trp Leu Asp Ala Ser Lys Arg Thr Ala Lys Glu Ile Gly Ala Ala
          180          185          190
Arg Lys Val Cys Phe Leu Gln Asn Leu Ile Val Ala Ile Leu Ile Pro
          195          200          205
Ala Tyr Thr Glu Thr Phe Val Leu Asp Thr Gly Asn Glu Leu Glu Gln
          210          215          220
Gln Val Leu Asp Asp Ala Tyr Phe Asn Ala Glu Asn Lys Asp Lys Val
          225          230          235          240
Asp Glu Met Cys Val Val Ala Ile Leu Ser Thr Leu His Asn Leu Phe
          245          250          255
Val Arg Lys Ser Leu Pro His His Leu Tyr Asn Ala Pro Phe Arg Leu
          260          265          270
Pro Pro Phe Gly Gln His Pro Ile Ile Asn Ile Glu Asn Ser Ser Phe
          275          280          285
Phe Asn Glu Asp Thr Thr Pro Ile Leu Ala Ser Ile Ser Ile Pro Ser
          290          295          300
Ser Met Val Ile Lys His His Thr Arg Lys Asn Ser Arg Trp Arg Cys

```

305					310					315				320
Pro	Asn	Asn	Leu	Met	Thr	Ala	Ala	Glu	Arg	Ser	Ile	Phe	Leu	Arg Gly
				325						330				335
Val	Leu	Thr	Val	Ser	Gly	Asp	Tyr	Gly	Trp	Phe	Ser	Val	Ile	Val Gly
			340					345					350	
Ser	Thr	Ile	Met	Pro	Ser	Val	Leu	Phe	Tyr	Gly	Asp	Arg	Lys	His Leu
		355					360				365			
Ile	Asn	Thr	Val	Lys	Ser	Asn	Asn	Phe	Ser	Ala	Ile	Thr	Cys	Ser Tyr
	370					375					380			
Trp	Asn	Lys	Tyr	Met	Asp	Cys	Arg	Ser	Tyr	Gly	Phe	Glu	Ile	Ile Asp
385					390					395				400
Thr	Pro	Glu	Asn	Asn	Cys	Gly	Phe	Arg	Ile	Arg	Ala	Ala	Ile	Asp Cys
				405					410					415
Ser	Asn	Thr	Asp	Phe	His	Ser	Pro	Val	Thr	Arg	Val	Asn	Lys	Lys Lys
			420					425					430	
Thr	Ser	Ile	Ile	Asn	Ala	Val	Lys	Asn	Pro	Phe	Phe	Ile	Arg	His Thr
	435						440					445		
Glu	Pro	Lys	Trp	Tyr	Asn	Lys	Asn	Ala	Met	Cys	Gly	Glu	Val	Leu Glu
	450					455					460			
Asn	Val	Gly	Val	Thr	Leu	Glu	Gln	His	Val	Arg	Val	Ser	Asp	Glu Tyr
465					470					475				480
Met	Asp	Arg	Phe	Gly	Ser	Leu	Leu	Leu	Gly	Arg	Glu	Lys	Lys	Trp Thr
			485						490					495
Cys	Asn	Tyr	Leu	Asp	Arg	Ile	Lys	Ser	Leu	Glu	Thr	Ile	Ser	Asn Asn
			500					505					510	
Leu	Lys	Gly	Lys	Ile	Asp	Thr	Met	Cys	Lys	Ile	Thr	Lys	Tyr	Asn Tyr
	515						520					525		
Lys	Ser	Ser	Ser	Leu	Tyr	Tyr	Lys	Gln	Ile	Thr	Ala	Thr	Ser	Asp Asp
	530					535					540			
Pro	Ile	Lys	Met	Lys	Ile	Ile	Ala	Ser	Ile	Asn	Lys	Arg	Arg	Tyr Leu
545					550					555				560
Cys	Asn	Ile	Phe	Ala	Ile	Ile	Ser	Ser	Glu	Lys	Lys	Asp	Glu	Val Glu
			565						570					575
Glu	Asp	His	Thr	Lys	Thr	Gly	Asn	Gly	Gly	Cys	Ala	Phe	Ser	Lys Tyr
		580					585					590		
Lys	Lys	Lys	Gln	Leu	Glu	Pro	Lys	Gln	His	Leu	Ile	Val	Lys	Val Asn
	595					600						605		
Lys	Tyr	Ile	Glu	Ala	Phe	Ser	Leu	Ile	Lys	Met	Leu	Arg	Asn	Asp Cys
	610					615					620			
Glu	Arg	Asn	Lys	Cys	Arg	Phe	Lys	Glu	Ala	Glu	Ile	Arg	Glu	Cys Ala
625					630					635				640
Asn	Glu	Leu	Val	Arg	Glu	Leu	Tyr	Arg	Ala	Ser	Ala	Arg	Ser	Tyr Val
			645						650					655
His	Asp	Leu	Val	Leu	Lys	Arg	Thr	Asn	Val	His	Leu	Thr	Trp	Gln Arg
	660							665					670	
Pro	Tyr	Asp	Glu	Asn	Ala	Asn	Thr	Ile	Met	Ser	Leu	Ile	Pro	Lys Cys
	675						680					685		
Lys	Leu	His	Thr	Val	Leu	Tyr	Asp	Lys	Asp	Ser	Arg	Asp	Val	Lys Leu
	690					695					700			
Leu	Asn	Phe	Leu	Arg	Thr	Arg	Asp	Gly	Asn	Tyr	Asn	Pro	Ile	Arg His
705					710					715				720
Ser	Met	Leu	Glu	Leu	Val	Tyr	Gly	Glu	Glu	Tyr	Ala	Lys	Asp	Val Ser
			725						730					735
Thr	Val	Thr	Cys	Phe	Glu	Trp	Leu	Lys	Trp	Cys	Ser	Lys	Lys	Gly Val
		740						745					750	
Ile	Lys	Tyr	Glu	Asp	Phe	Leu	Asp	Arg	Tyr	Glu	Lys	Thr	Gly	Glu Glu
	755						760					765		
Asp	Lys	Asp	Glu	Arg	Glu	Phe	Phe	Arg	Leu	Lys	Lys	Cys	Ser	Arg Asp
	770					775					780			
His	Thr	Lys	Asp	Ile	Lys	Lys	Ile	Glu	Asn	Val	Leu	Asn	Ser	Asp Thr
785					790					795				800



Lys Tyr Ser Leu Asp Lys Asn Val Gln Thr His Ala Ser Ser Ser Thr  
                   805                                  810                  815  
 Val Val Lys Asn Asp Thr Asp Gly Lys Thr Ser Met Val Gly Trp Asp  
                   820                                  825                  830  
 Tyr Ile Phe Ser Ile Gly Lys Gly Glu Lys Thr Thr Lys Lys Arg Lys  
                   835                                  840                  845  
 Leu Glu Thr Ile Asp Ile Ser Ser Ser Asp Asp Asp Glu Glu Glu  
                   850                                  855                  860  
 Glu Glu Glu Asp Glu Gly Lys Arg Met Lys Met Asn Asn Cys Ser Ser  
                   865                                  870                  875                  880  
 Ser Ile Lys Asn Lys Ser Lys Asn Lys Asn Gly Arg Met Cys Cys Thr  
                   885                                  890                  895  
 Asp Ile Leu Asn Val Val Glu Pro Ser Leu Pro Asn Thr Leu Ser Phe  
                   900                                  905                  910  
 Asn Cys Val Lys Ser Met Asp Val Leu Asn Leu Leu  
                   915                                  920

<210> 286  
 <211> 635  
 <212> DNA  
 <213> SHRIMP

<400> 286  
 catttcttcg tctacataaa gaagaataac tgggttctctg gggccattag taatgacact 60  
 actattaact ccacaaattc tggaggagta ggaggattat gggataatgt ttctgattca 120  
 gagtcaggga cgtttccatc tagggtacaa tattccacat caacgaaaaa tttagtcaat 180  
 atagccatgg atggagatta tgcgacatta gtaaggaacg gaatgtccac aaatcaaagg 240  
 ccatatgaaa cctacaaaga cgtggaggat agccagttct atttacattt ttccacggt 300  
 agaaatttta aacctttaaa cgggtgatgaa aataaagacc accttgaaaag ggatgaaaagt 360  
 tttgtgttga tcgaatcacc atattataat ggagggtttt tatcatataa tatcaacaac 420  
 ccaaatccca tttacaattc tactgaaaag ccgtatatta acacggagat aacttccatc 480  
 gtcagcacca ctggtacaga tgaaagggtt tctgcctcg agaaggaata cgtcgaagat 540  
 ggtgaagaag gagttacaga aaatagggtac tttttacgcc acatggcaag taattatgtt 600  
 gtaaaggcta gtttcaaatac agtcatgccc actat 635

<210> 287  
 <211> 431  
 <212> DNA  
 <213> SHRIMP

<400> 287  
 ctgaagaata ttgaaagaag acttcttgaa gaggaccgat aaaaaaatgg ccaccttcca 60  
 gactgacgcc gatttcttgc tgggtgggga tgatactagt agatatgaag aagtgatgaa 120  
 gacttttgat actgttgagg cagtcaggaa gagtgatcta gatgaccgtg ttacatgggt 180  
 gtgcctaaag cagggatcta cttttgtcct caatggaggc atcgaagaat tgcgtctttt 240  
 gactggagat tcaacgctgg agattcaacc catgattgtg ccaacaacag aataaaataa 300  
 agacggtgac gggagactaa tatctttctt agtttcccg caccgtgaaa atgttggtta 360  
 tttcttccct atgtttaaaa atttgtcttg gttaaaaaaa taaaacgaaa actgtcaaaa 420  
 aaaaaaaaaa a 431

<210> 288  
 <211> 1103  
 <212> DNA  
 <213> SHRIMP

<400> 288  
 ctatttttagg gtactagaaa acgttggtcag aaccaatcat gaggtttatc ccgatgttga 60  
 taattgcgct tatcgctgca ttgttattg cagctcttct tactgccaat tcaaattacc 120  
 tggatcacia tatcaataag gaactaaatt tgaccggtc ctttcaactt cgggggaacat 180  
 tcacaccaga agatatagct cataacaaca gaattctccc ttccaagctg agtgttttag 240

```

aaagagggtc aatcatttta gcagaaatgg acaagtacaa aaatgcacaa cctacagtaa 300
ataattctca agagaggagg aacattttcta ctctcaaca acaacaacag accacccct 360
catcccaatc atcttcccaa gttgaacttt aaattctata agaaaatgct gatttttggt 420
cctgtatgtg acgagtctcg caccgacgag aaagaagatt ttaacaacga tgaggaagaa 480
aatatattaa aggaggaaga agttaagtga ggagaaaagg ttgtaaatat cgtagtaggg 540
agtattaaga tgatgaaacc tggttcaaaa atcaaaacaa agtacaggct ctactccctc 600
cttgcaagtg cgatagggag tagaaagaaa gctgaagaat atattgaacg tctatacaat 660
tccttttctt ccatgacggt gaatgaagga ggacgtctgg cttcagcgat ttattgtcca 720
tcctacaaca ataaaaggat aaaaaacaat cggtctaggc ctgtgaagct gatccatgcc 780
tccagggaat tggtatctga aactacggtg agggaggaaa tactacggaa atctcccgct 840
tcttcttctt cttcttcaac gtcatcatcc acttctctgt tttcttcaat ttttttggtt 900
gtaccttcta attgtacttc taaaactgta tgcgattttg taaaacacat acagtatgaa 960
gaagatatta accgtttaag gtataacata atacatatat ctgaagaaaa ctatgcttca 1020
agattttcta aaattaatag attaaactaca tgtatacaag gtataagtaa gacaataaag 1080
attctatatt ccaaaaaaaaa aaa 1103

```

&lt;210&gt; 289

&lt;211&gt; 234

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 289

```

acaacctcca catctccttc taattctaac acacaagaaa aggataaaaa taaaataaat 60
attgatgcta acaaaattta ttcaagaggt cacaacatg taccaatatc aattgtaaaa 120
agcacgttaa acaaaagcgtt aaaaatagca ggtatgtctg ctatgagcaa agagcaagtg 180
ttaacaatgt accaattaat aaaccttagg taggaagag aaaaaaaaaa aaaa 234

```

&lt;210&gt; 290

&lt;211&gt; 597

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 290

```

aaaatactcc tcaacttcca acaagaatgg gctctgctaa cttgaacgac cgaactctac 60
tcgtggagga agggcaagta aacgactacg ggtctaccaa caagaaacaa ccagtgtgct 120
gtcacatttg ctatctagga agaggaggaa gaattgcatg tgtcatcgca tctgttctgg 180
gctgcgtcct cctgctgggt actgtcatga ctttgttgat tgtggtactg ggaactgcac 240
cagttaattg tgatgtgagc ccacagagct actgcgccg gccgcagccg ccggtgcagt 300
ttcatcctta ccattcttct tccacaacca ccactacttc cactactact actactacac 360
caactccacc agatactaaa aaagttgacg acgactatga tgacgacgtc aatattggag 420
ggcaatcagt tactgtgaat aatggagggt ttttcatcaa tggaagaaaa ctctcaaaaag 480
aagaagaaaa agcaatgggt atcaatacag ataatggagg atttgtttgg aagaatgggt 540
ttttttctca atatggcaaa aaataaaata tggatatatta aaaaaaaaaa aaaaaa 597

```

&lt;210&gt; 291

&lt;211&gt; 335

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 291

```

cgagaacaaa agattgttgt ctaggaacaa agaaacatta aaaatggttg cccgaagctc 60
caagacacaaa tcccgcctgt gaagcaagaa gaggtccacc actgctggac gcatctccaa 120
gcggaggagc ccatcaatga agaagcgtgc aggaagaag agctccactg tccgtcgccg 180
ttcctcaaa agcggaagaa agtctggagc ccgcaagtca aggcgttaat tcttccctgt 240
acaacaacta tgttatttaa ttgattttt ttcttctgaa taattggaaa taataaaaca 300
tccattgaaa cttaaaaaaa aaaaaaaaaa aaaaa 335

```

&lt;210&gt; 292

&lt;211&gt; 225

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 292

ggagctctgt ctttcttgt gcaatctgac attggctcga cccagcggc caccctccaa 60  
acttgacatc agaccgaccc agcgggccac cctctaaact cgagcgaccc agaaaaattt 120  
ttgaaaagtt tttagatgg aggaagagta aaattcccta gtgtaaacag taccaagaag 180  
accaataaat ttagtggtta taaaactaca catatgatta aaaaa 225

&lt;210&gt; 293

&lt;211&gt; 107

&lt;212&gt; DNA

&lt;213&gt; SHRIMP

&lt;400&gt; 293

tcctctctct tcttctctc ctgcacataa aaaatcacgt cttccggatg aaggcgaaaa 60  
atgtacactc tgtaatttt ttcaaacaat aaactaacca ctttgta 107